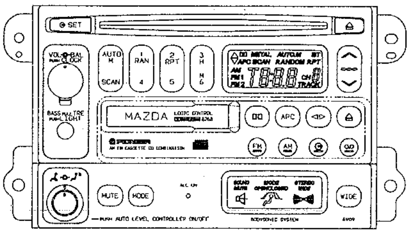
PIONEER
The Art of Entertainment

Service Manual



TUNER DECK •CD PLAYER

FH-5071ZM

US

- **This model has installed in MAZDA ROADSTER. (MAZDA No. NA52 66 9W0A)**

- **This additional service manual is designed to be used together with Model DEH-K4141ZM/US Service Manual(CRT1196). Refer to it for circuit description and adjustment, etc. which are not shown in this manual.**

- **Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.**

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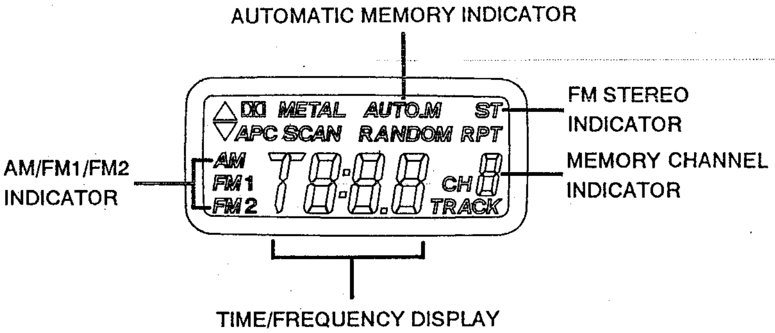
1. GENERAL GUIDE

RADIO, CLOCK


AUTOMATIC MEMORY INDICATOR
FM STEREO INDICATOR
MEMORY CHANNEL INDICATOR
AM/FM1/FM2 INDICATOR
TIME/FREQUENCY DISPLAY
METAL
AUTO.M
ST
APC SCAN
RANDOM RPT
AM
FM 1
FM 2
CH
TRACK

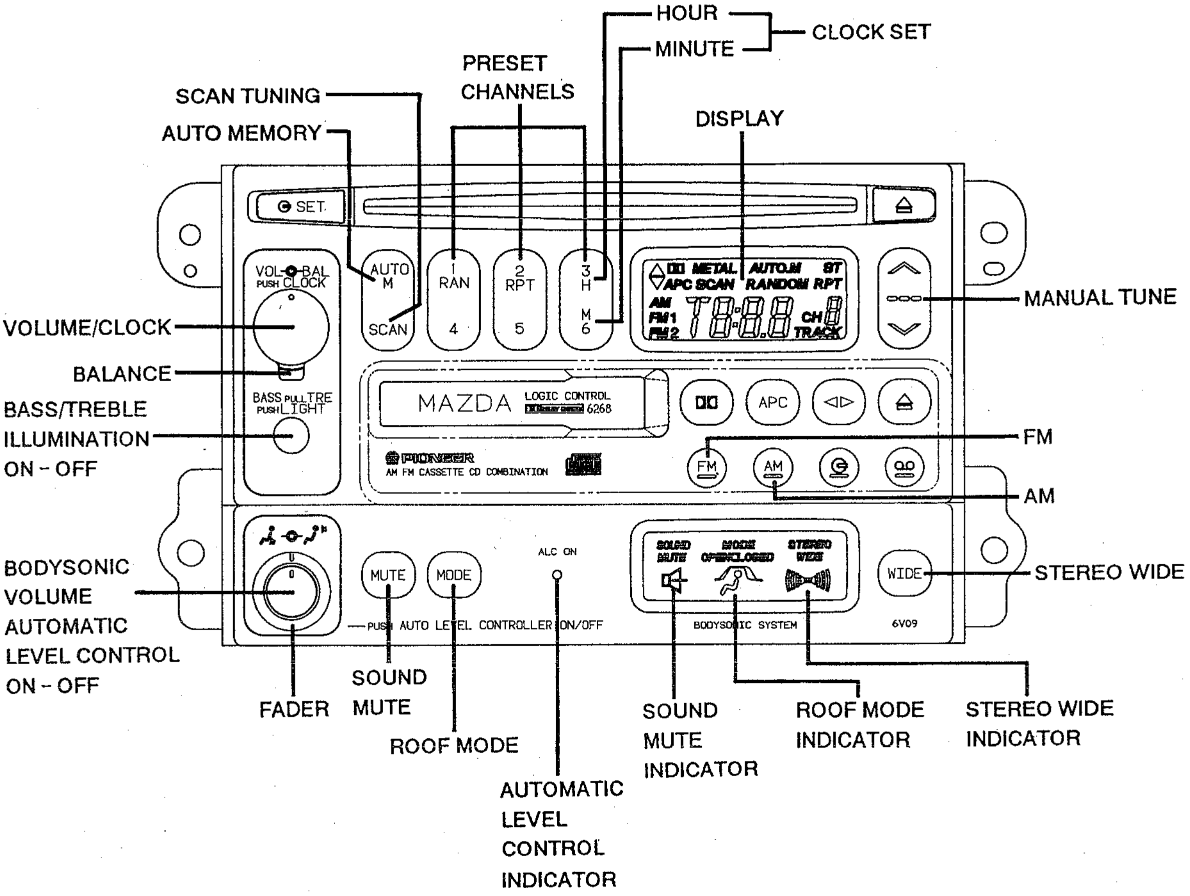
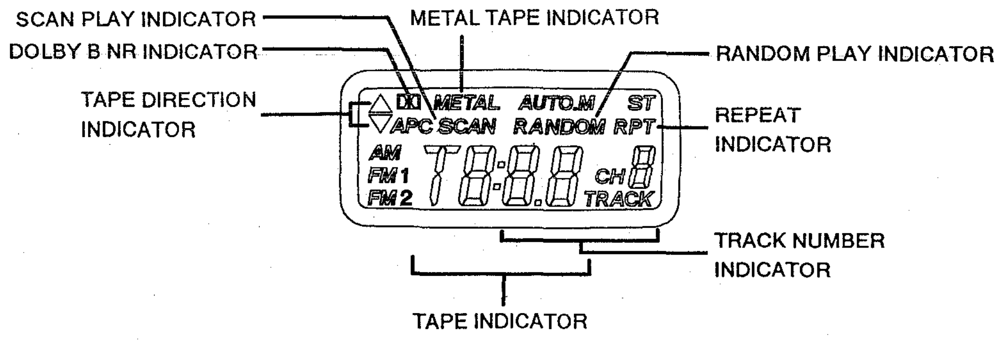

HOUR
MINUTE
CLOCK SET
PRESET CHANNELS
SCAN TUNING
AUTO MEMORY
DISPLAY
MANUAL TUNE
VOLUME/CLOCK
BALANCE
BASS/TREBLE
ILLUMINATION ON - OFF
FM
AM
BODYSONIC VOLUME
AUTOMATIC LEVEL CONTROL ON - OFF
STEREO WIDE
FADER
SOUND MUTE
ROOF MODE
AUTOMATIC LEVEL CONTROL INDICATOR
SOUND MUTE INDICATOR
ROOF MODE INDICATOR
STEREO WIDE INDICATOR
SET
AUTO M
SCAN
1 RAN 4
2 RPT 5
3 H
M 6
VOL BAL PUSH CLOCK
BASS PULL TRE PUSH LIGHT
MAZDA
LOGIC CONTROL
6268
APC
PIONEER
AM FM CASSETTE CD COMBINATION
FM
AM
MUTE
MODE
ALC ON
PUSH AUTO LEVEL CONTROLLER ON/OFF
SOUND MUTE
MODE OPEN/CLOSED
STEREO WIDE
BODYSONIC SYSTEM
WIDE
6V09

Fig. 1

CD, CASSETTE


SCAN PLAY INDICATOR
METAL TAPE INDICATOR
DOLBY B NR INDICATOR
RANDOM PLAY INDICATOR
TAPE DIRECTION INDICATOR
REPEAT INDICATOR
METAL
AUTO.M
ST
APC SCAN
RANDOM RPT
AM
FM1
FM2
CH
TRACK
TRACK NUMBER INDICATOR
TAPE INDICATOR

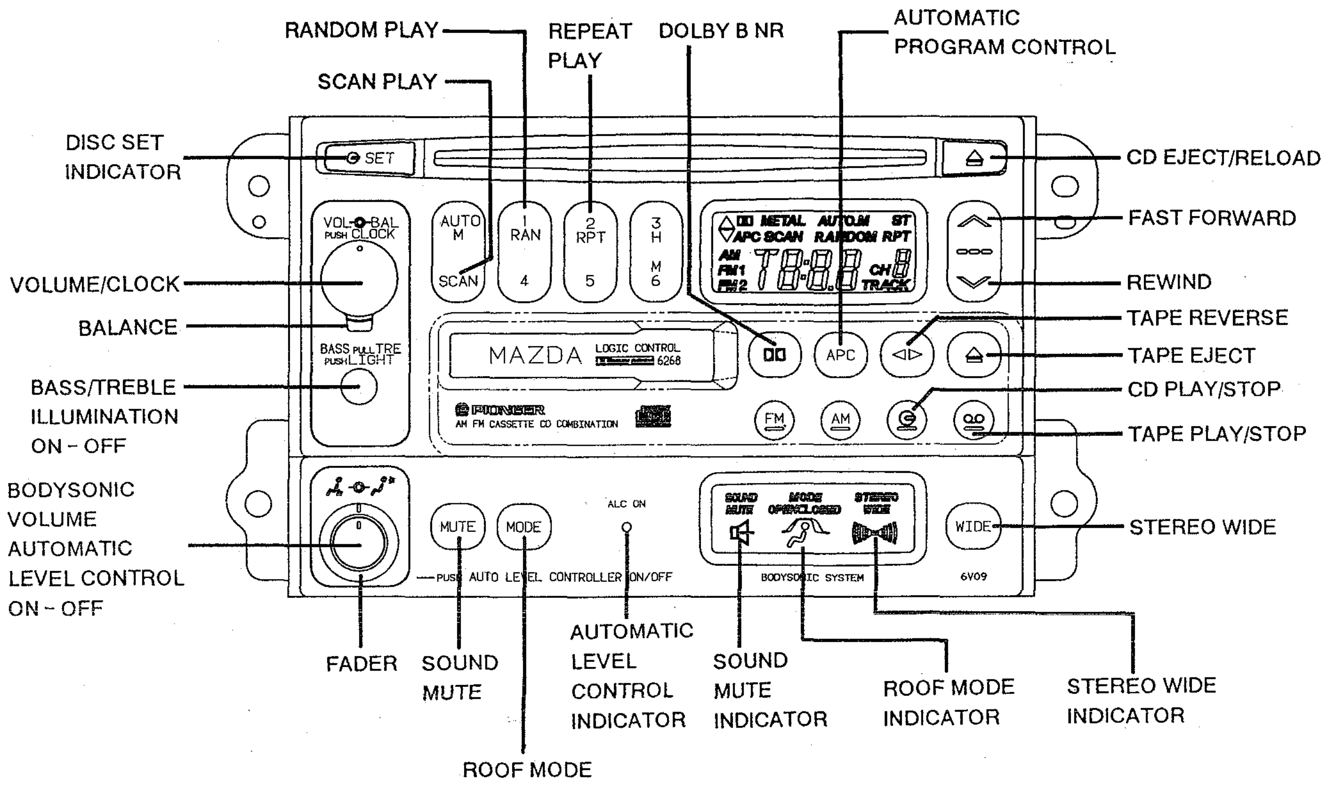
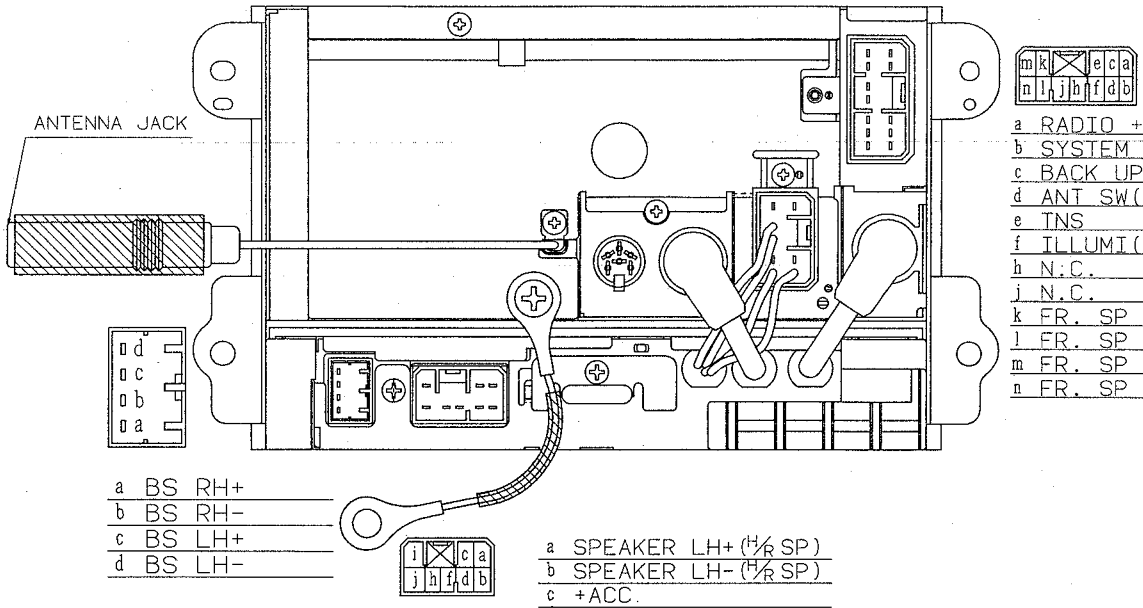

RANDOM PLAY
REPEAT PLAY
DOLBY B NR
AUTOMATIC PROGRAM CONTROL
SCAN PLAY
DISC SET INDICATOR
SET
CD EJECT/RELOAD
FAST FORWARD
VOL-BAL
PUSH CLOCK
AUTO M
SCAN
1 RAN
4
2 RPT
5
3 H
M 6
VOLUME/CLOCK
REWIND
BALANCE
TAPE REVERSE
BASS PULL TRE
PUSH LIGHT
MAZDA
LOGIC CONTROL
6268
APC
TAPE EJECT
BASS/TREBLE ILLUMINATION ON - OFF
CD PLAY/STOP
PIONEER
AM FM CASSETTE CD COMBINATION
FM
AM
TAPE PLAY/STOP
BODYSONIC VOLUME AUTOMATIC LEVEL CONTROL ON - OFF
ALC ON
MUTE
MODE
SOUND MUTE
MODE OPEN/CLOSED
STEREO WIDE
WIDE
STEREO WIDE
PUSH AUTO LEVEL CONTROLLER ON/OFF
BODYSONIC SYSTEM
6V09
FADER
SOUND MUTE
AUTOMATIC LEVEL CONTROL INDICATOR
SOUND MUTE INDICATOR
ROOF MODE INDICATOR
STEREO WIDE INDICATOR
ROOF MODE

Fig. 2

2. CONNECTOR FUNCTION DESCRIPTION


ANTENNA JACK
d
c
b
a
i ☒ c a
j h f d b
m k ☒ e c a
n l j h f d b

a	BS RH+
b	BS RH-
c	BS LH+
d	BS LH-

a	SPEAKER LH+(H/R SP)
b	SPEAKER LH-(H/R SP)
c	+ACC
d	ILLUMI(IN)
f	SPEAKER RH+(H/R SP)
h	SPEAKER RH-(H/R SP)
i	SYSTEM MUTE
j	ALC(METER)

a	RADIO +ACC
b	SYSTEM MUTE
c	BACK UP +B
d	ANT SW(ON EARTH)
e	TNS
f	ILLUMI(OUT)
h	N.C.
j	N.C.
k	FR. SP LH+
l	FR. SP LH-
m	FR. SP RH+
n	FR. SP RH-

Fig. 3

3. DISASSEMBLY

- Removing the Case Unit

1. Remove the twelve screws, and remove the two brackets.
2. Remove the four screws A.
3. Disconnect the stoppers indicated by arrows, and remove the case unit.

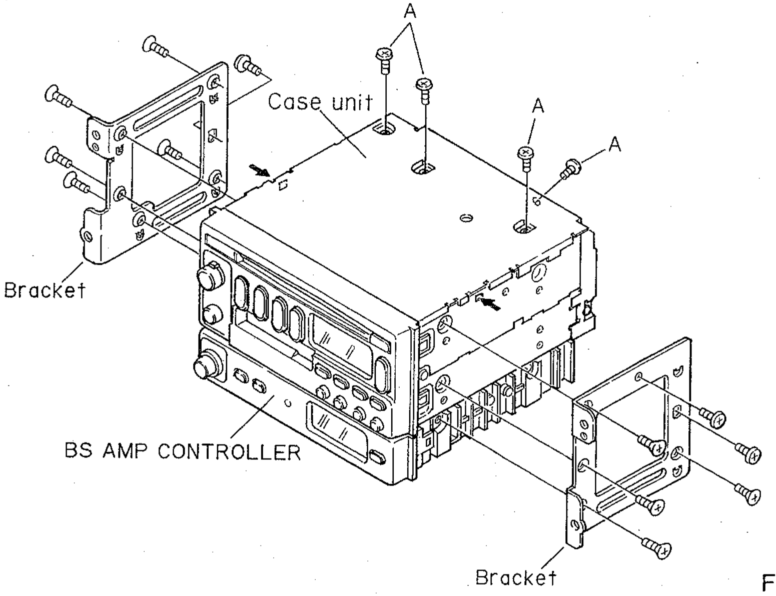

A
A
A
Case unit
Bracket
BS AMP CONTROLLER
Bracket

Fig. 4

- Removing the Tuner Assy

1. Remove the two screws.
2. Disconnect the two connectors, and remove the tuner assy.

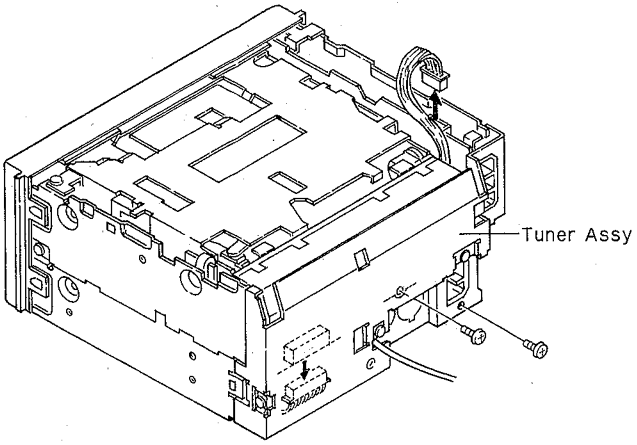


Fig. 5

- Removing the IF·MPX P.C. Board

1. Remove the two screws, and remove the case.
2. Remove the solder at two locations indicated by arrows, and remove the screw.
3. Disconnect the two connectors, and raise the IF·MPX p.c. board to remove from FE·AM p.c. board.

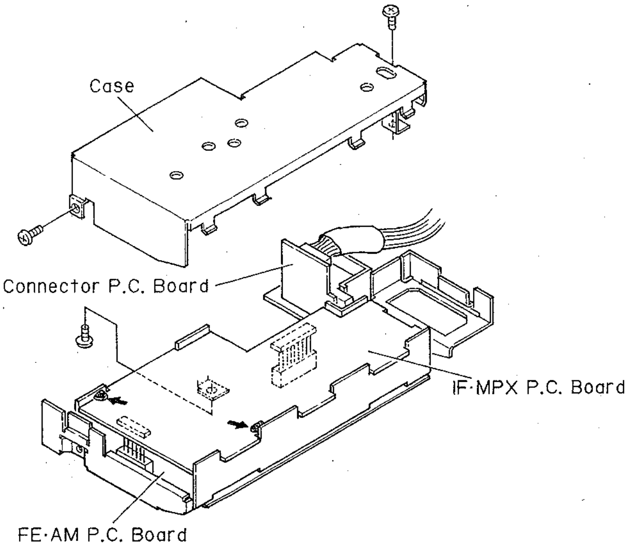

Case
Connector P.C. Board
IF·MPX P.C. Board
FE·AM P.C. Board

Fig. 6

- Removing the Grille Assy

1. Remove the three knobs.
2. Disengage the four claws indicated by arrows.
3. Disconnect the two connectors, and remove the grille assy.

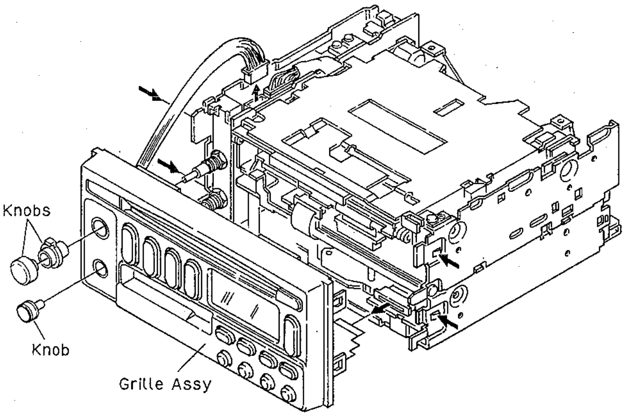

Knobs
Knob
Grille Assy

Fig. 7

- Removing the CD Assy

1. Remove the three screws.
2. Disconnect the two connectors, and remove the CD assy.

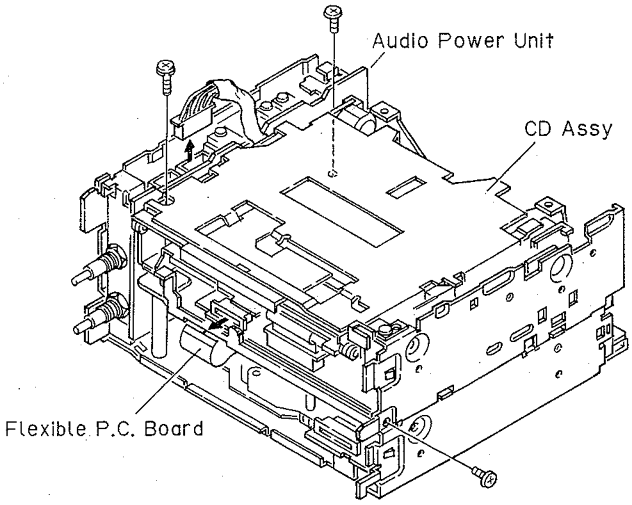

Audio Power Unit
CD Assy
Flexible P.C. Board

Fig. 8

● Removing the CD Mechanism Unit

1. Remove the three screws.
2. Disconnect the two connectors, and remove the CD mechanism unit.

NOTE: When remove the flexible p.c. board, always insert a shorting pin or insert an inter-pattern short (jumper) before disconnecting the board from the connector.

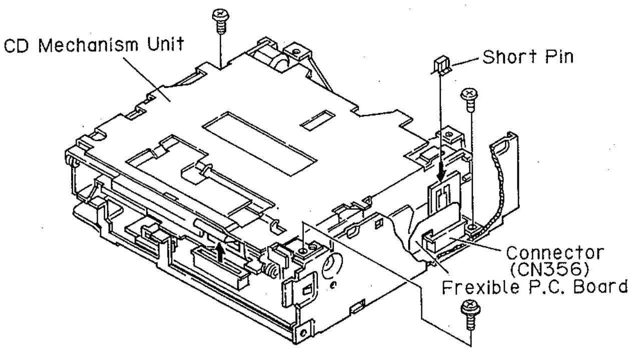

CD Mechanism Unit
Short Pin
Connector
(CN356)
Frexible P.C. Board

Fig. 9

● Removing the Cassette Mechanism Assy

1. Remove the two screws, and remove the bracket.
2. Disconnect the two connectors.
3. Remove the four screws, and remove the cassette mechanism assy.

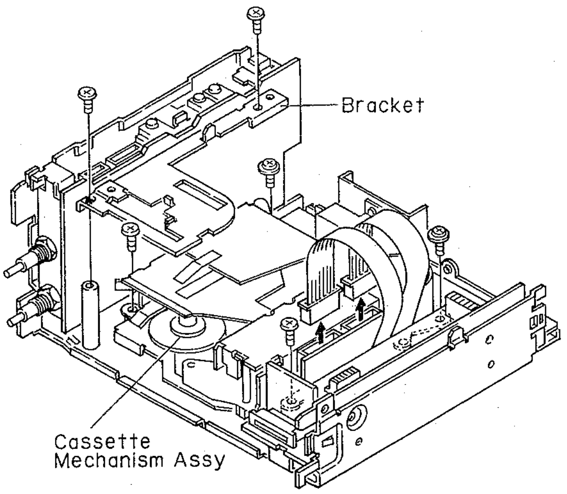

Bracket
Cassette
Mechanism Assy

Fig. 10

● Removing the Audio Power Unit (Fig. 11)

1. Remove the three screws.
2. Disconnect the connector, and raise the audio power unit to remove from control p.c. board.

● Removing the P.C. Board (Fig. 11)

1. Disconnect the connector, and raise the p.c. board to remove from control p.c. board.

● Removing the Dolby NR P.C. Board (Fig. 11)

1. Disconnect the connector, and raise the dolby NR p.c. board to remove from control p.c. board.

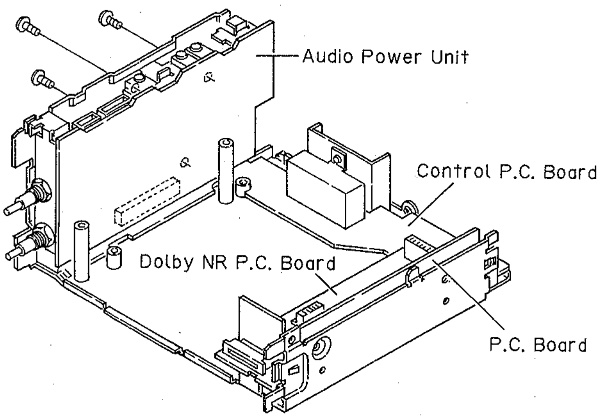

Audio Power Unit
Control P.C. Board
Dolby NR P.C. Board
P.C. Board

Fig. 11

4. ADJUSTMENT

● BS Amp Controller

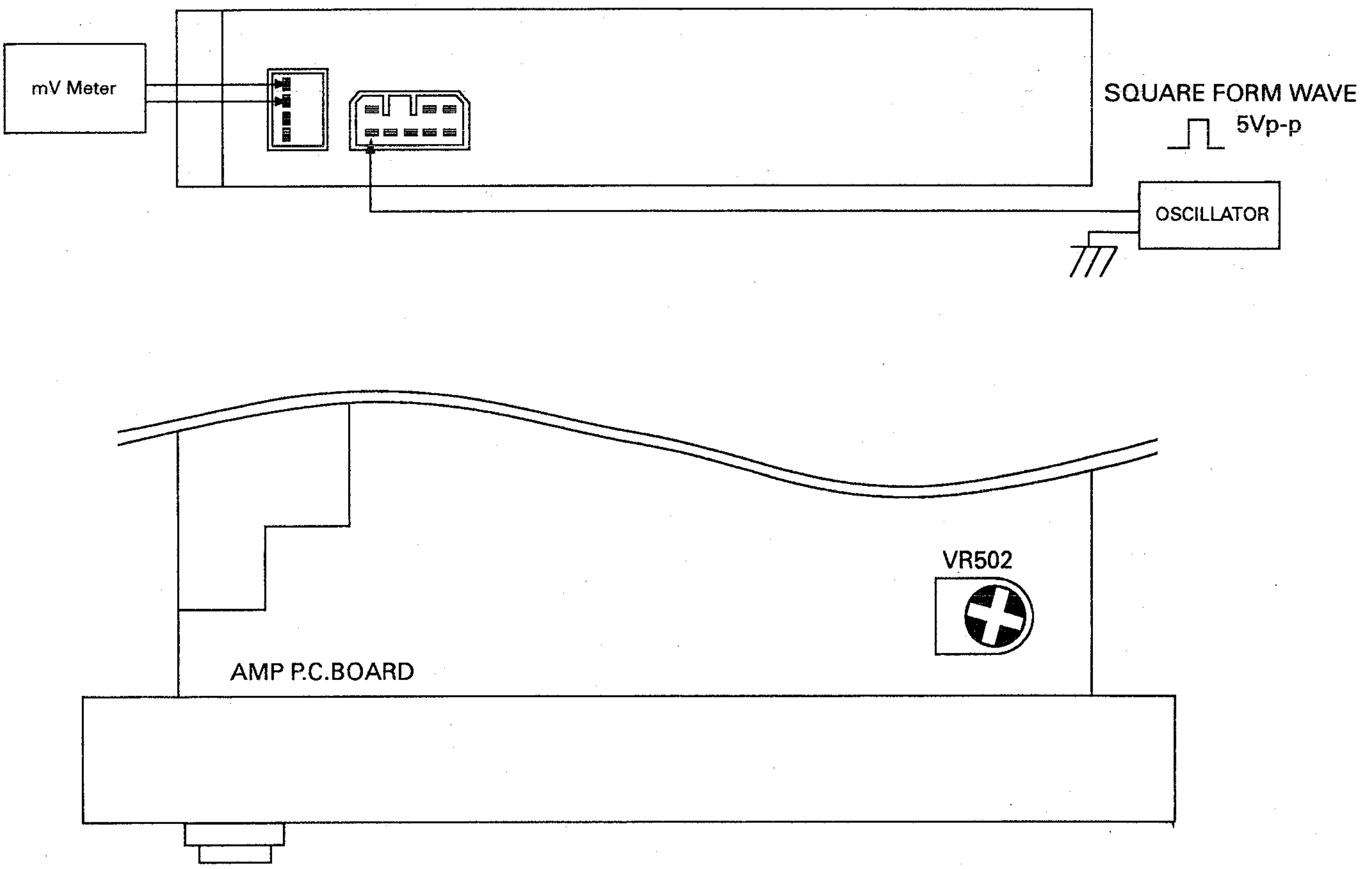

mV Meter
SQUARE FORM WAVE
5Vp-p
OSCILLATOR
VR502
AMP P.C.BOARD

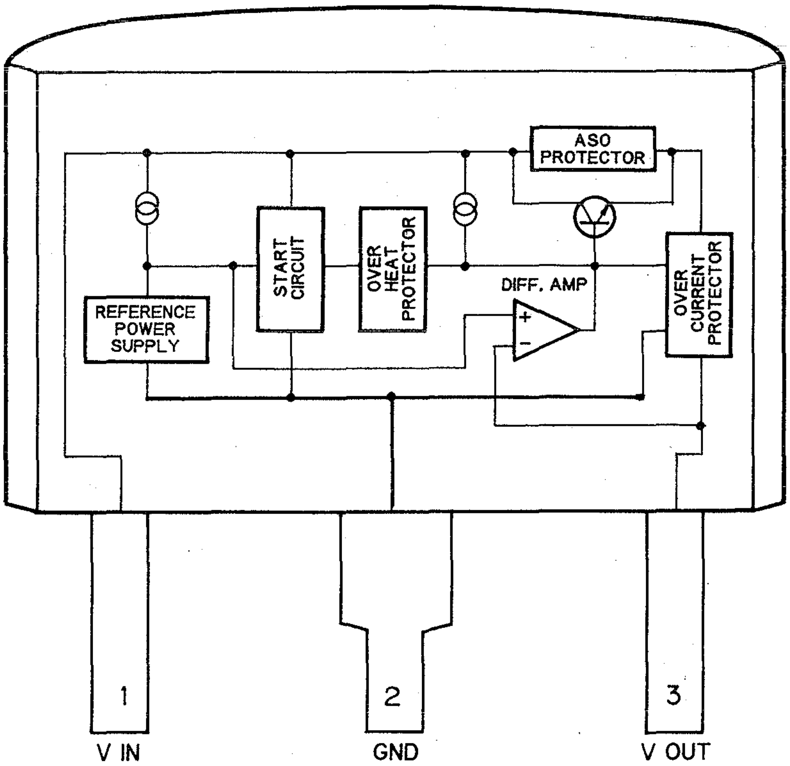
Fig. 12

ALC ADJUSTMENT

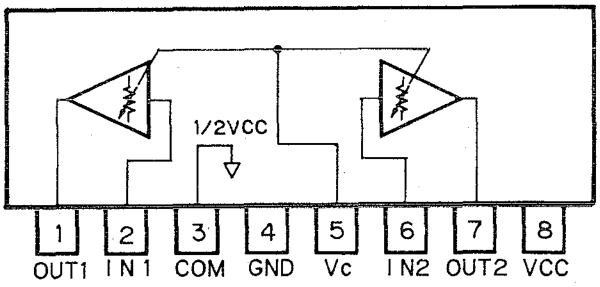
No.	Osillator Frequency	Adjusting Point	Adjustment Method (Switch Position)
1	70Hz	———	mV Meter:AdBs (ALC Switch OFF)
2	28Hz	VR502	mV Meter:AdBs+6dBs (ALC Switch ON)

- **ICs**
- **Amp Unit**

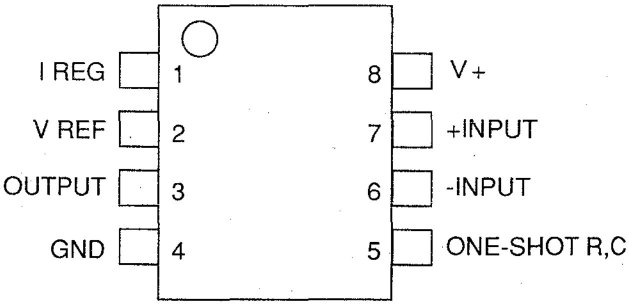
IC464:M5237L


ASO PROTECTOR
START CIRCUIT
OVER HEAT PROTECTOR
OVER CURRENT PROTECTOR
DIFF. AMP
REFERENCE POWER SUPPLY
1
V IN
2
GND
3
V OUT

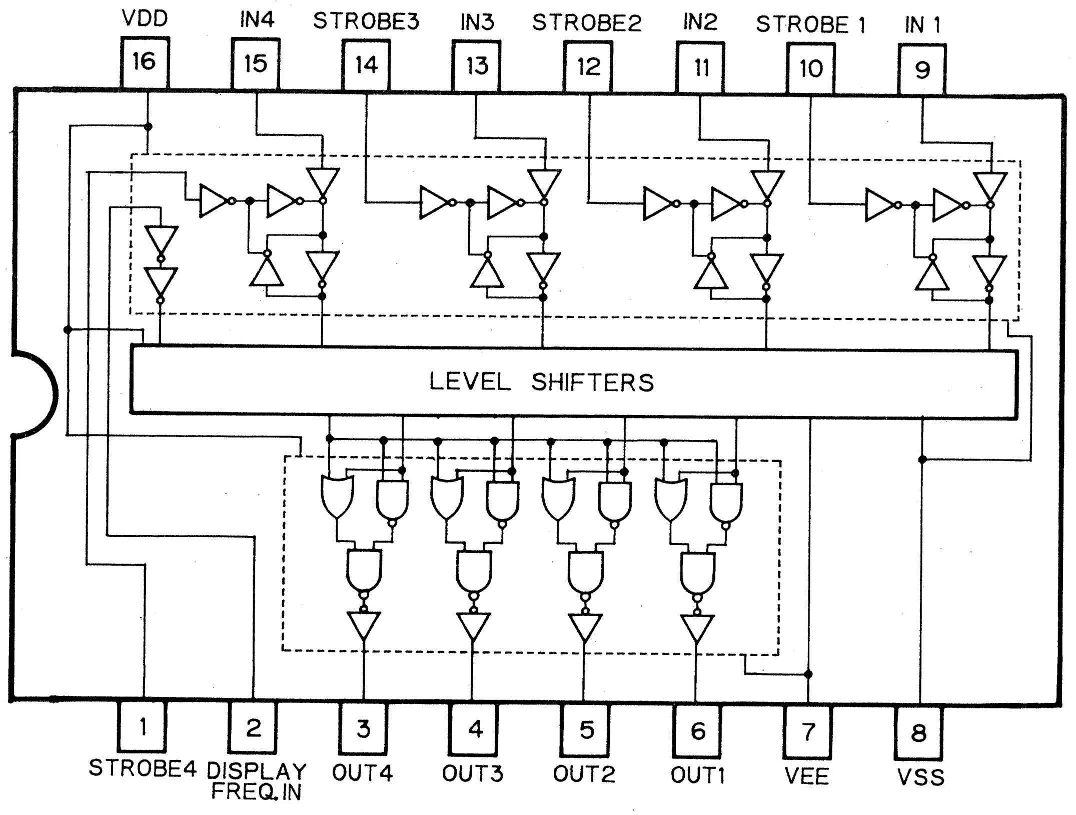
IC459:M5222L


1/2VCC
1
OUT1
2
I N 1
3
COM
4
GND
5
Vc
6
I N2
7
OUT2
8
VCC

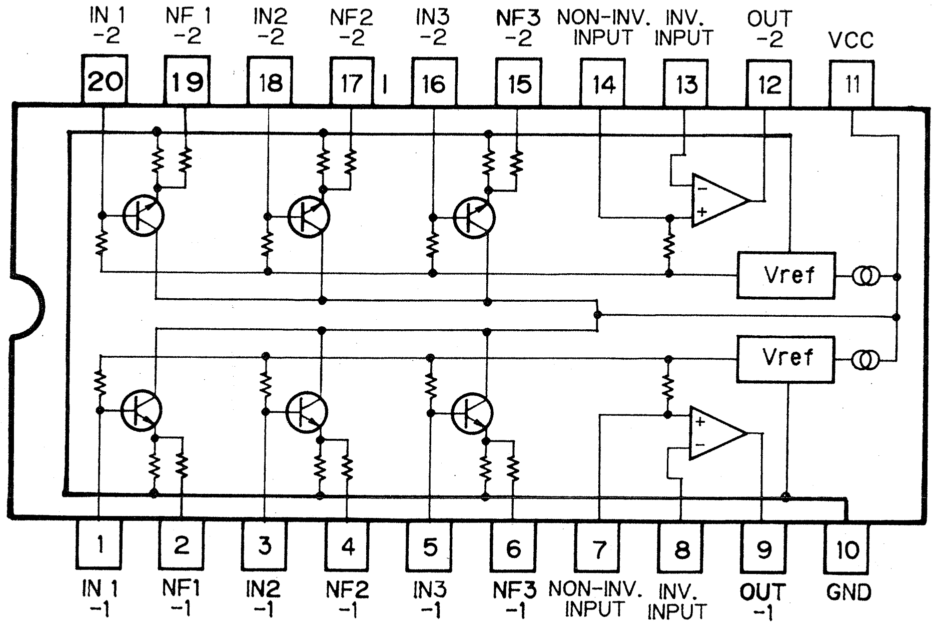
IC452:NJM4151D


I REG
1
V REF
2
OUTPUT
3
GND
4
8
V+
7
+INPUT
6
-INPUT
5
ONE-SHOT R,C

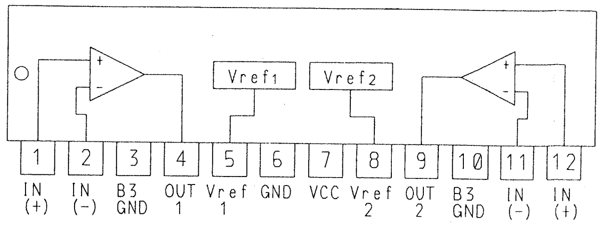
IC902:TC4054BF


VDD
IN4
STROBE3
IN3
STROBE2
IN2
STROBE 1
IN 1
16
15
14
13
12
11
10
9
LEVEL SHIFTERS
1
2
3
4
5
6
7
8
STROBE4
DISPLAY FREQ.IN
OUT4
OUT3
OUT2
OUT1
VEE
VSS

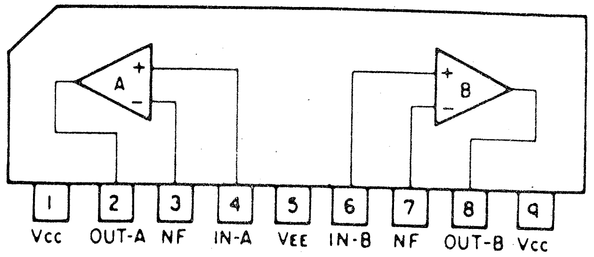
IC456:M5243P-09


IN 1 -2
NF 1 -2
IN2 -2
NF2 -2
IN3 -2
NF3 -2
NON-INV. INPUT
INV. INPUT
OUT -2
VCC
20
19
18
17
16
15
14
13
12
11
Vref
Vref
1
2
3
4
5
6
7
8
9
10
IN 1 -1
NF1 -1
IN2 -1
NF2 -1
IN3 -1
NF3 -1
NON-INV. INPUT
INV. INPUT
OUT -1
GND

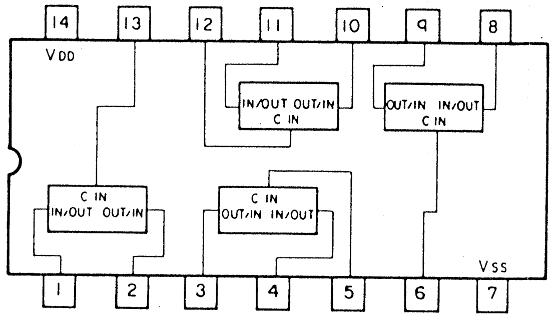
IC451:TA8181SN


Vref1
Vref2
1
2
3
4
5
6
7
8
9
10
11
12
IN (+)
IN (-)
B3 GND
OUT 1
Vref 1
GND
VCC
Vref 2
OUT 2
B3 GND
IN (-)
IN (+)

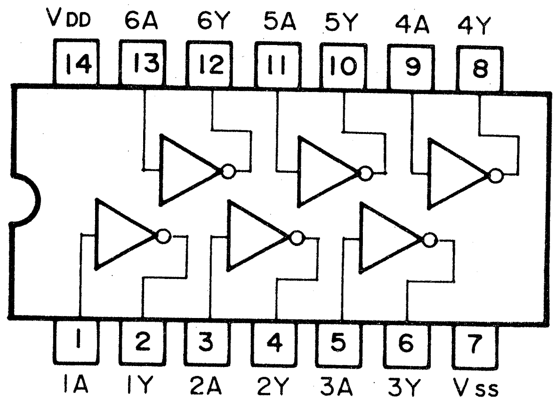
IC453, 454, 457, 460~463, 551:NJM2068S


A
B
1
2
3
4
5
6
7
8
9
Vcc
OUT-A
NF
IN-A
VEE
IN-B
NF
OUT-B
Vcc

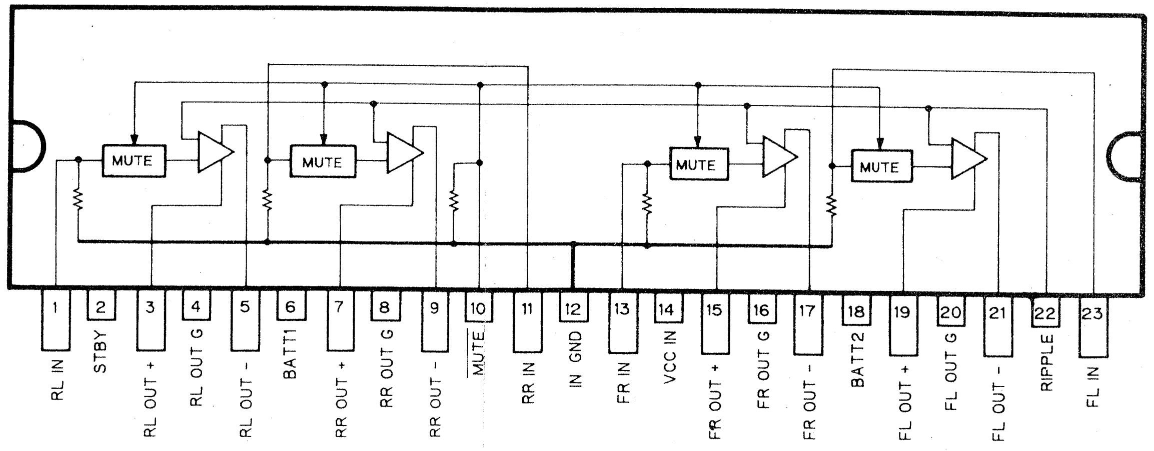
IC455:TC4066BP


14
13
12
11
10
9
8
VDD
IN/OUT OUT/IN
C IN
OUT/IN IN/OUT
C IN
C IN
IN/OUT OUT/IN
C IN
OUT/IN IN/OUT
Vss
1
2
3
4
5
6
7

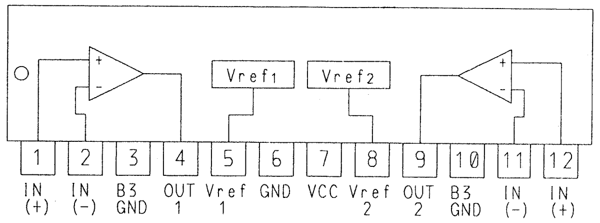
IC901:TC4069UBF


VDD
6A
6Y
5A
5Y
4A
4Y
14
13
12
11
10
9
8
1
2
3
4
5
6
7
1A
1Y
2A
2Y
3A
3Y
Vss

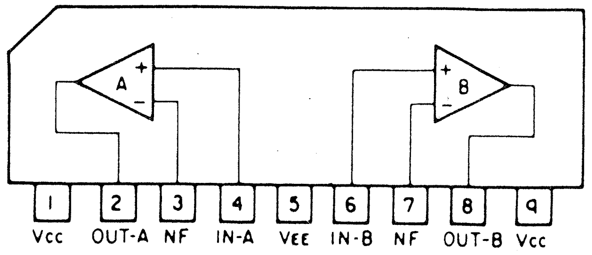
IC552:PA3027A


MUTE
MUTE
MUTE
MUTE
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
RL IN
STBY
RL OUT +
RL OUT G
RL OUT -
BATT1
RR OUT +
RR OUT G
RR OUT -
MUTE
RR IN
IN GND
FR IN
VCC IN
FR OUT +
FR OUT G
FR OUT -
BATT2
FL OUT +
FL OUT G
FL OUT -
RIPPLE
FL IN

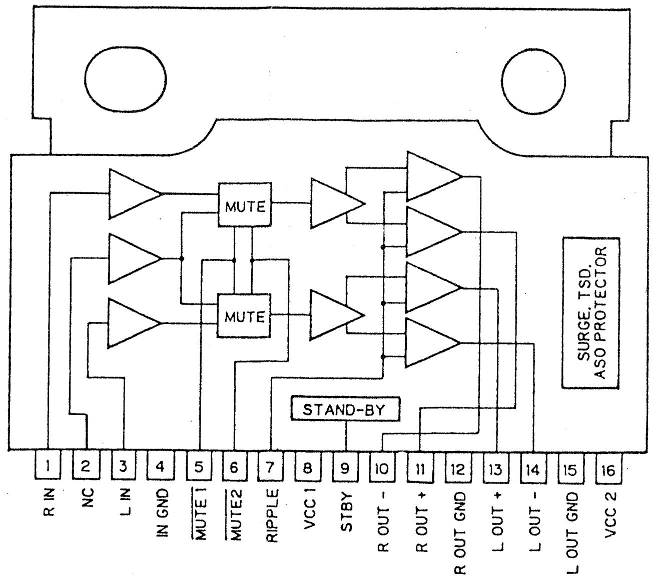
IC451:TA8181SN


Vref1
Vref2
1 IN (+)
2 IN (-)
3 B3 GND
4 OUT 1
5 Vref 1
6 GND
7 VCC
8 Vref 2
9 OUT 2
10 B3 GND
11 IN (-)
12 IN (+)

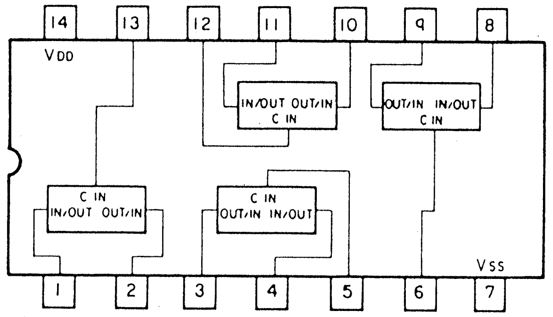
IC453, 454, 457, 460~463, 551:NJM2068S


A
B
1 Vcc
2 OUT-A
3 NF
4 IN-A
5 VEE
6 IN-B
7 NF
8 OUT-B
9 Vcc

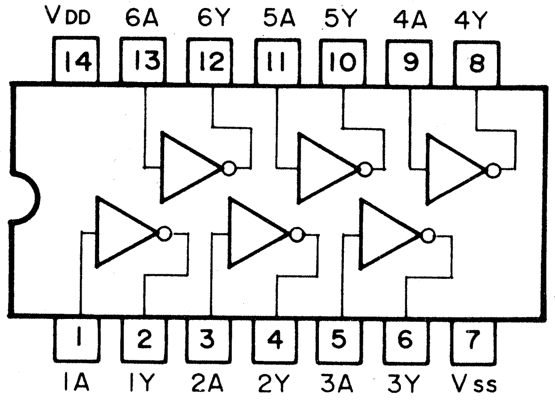
IC553:HA13139


MUTE
MUTE
STAND-BY
SURGE, TSD, ASO PROTECTOR
1 R IN
2 NC
3 L IN
4 IN GND
5 MUTE1
6 MUTE2
7 RIPPLE
8 VCC 1
9 STBY
10 R OUT -
11 R OUT +
12 R OUT GND
13 L OUT +
14 L OUT -
15 L OUT GND
16 VCC 2

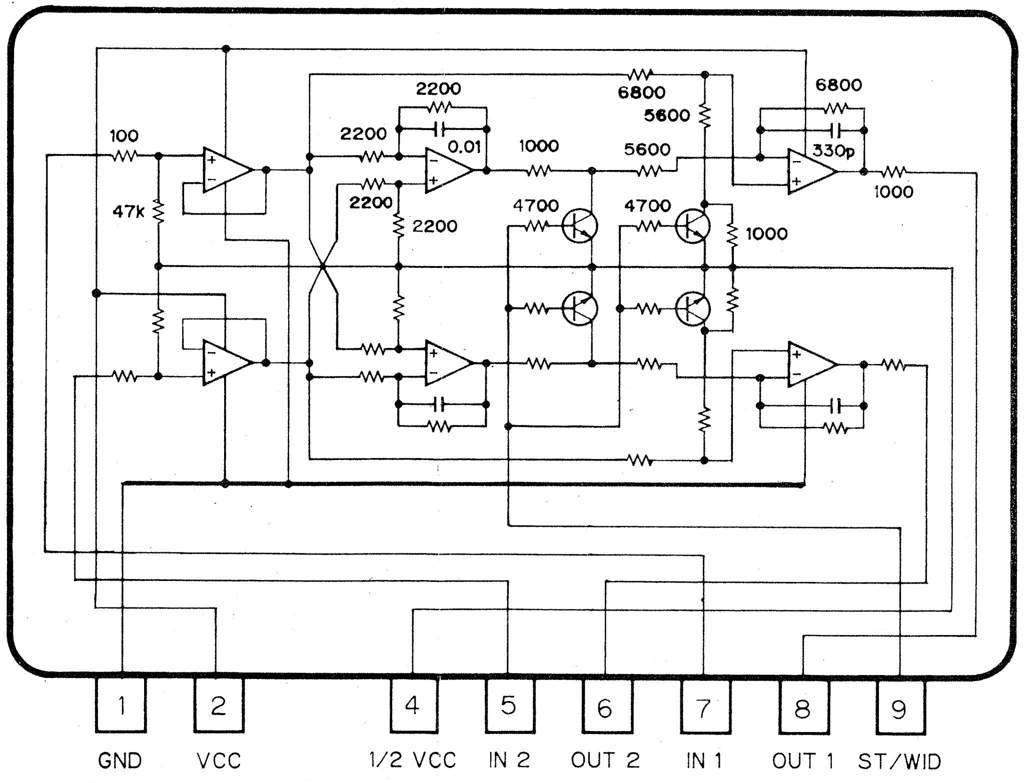
IC455:TC4066BP


14 13 12 11 10 9 8
VDD
IN/OUT OUT/IN C IN
OUT/IN IN/OUT C IN
C IN IN/OUT OUT/IN
C IN OUT/IN IN/OUT
VSS
1 2 3 4 5 6 7

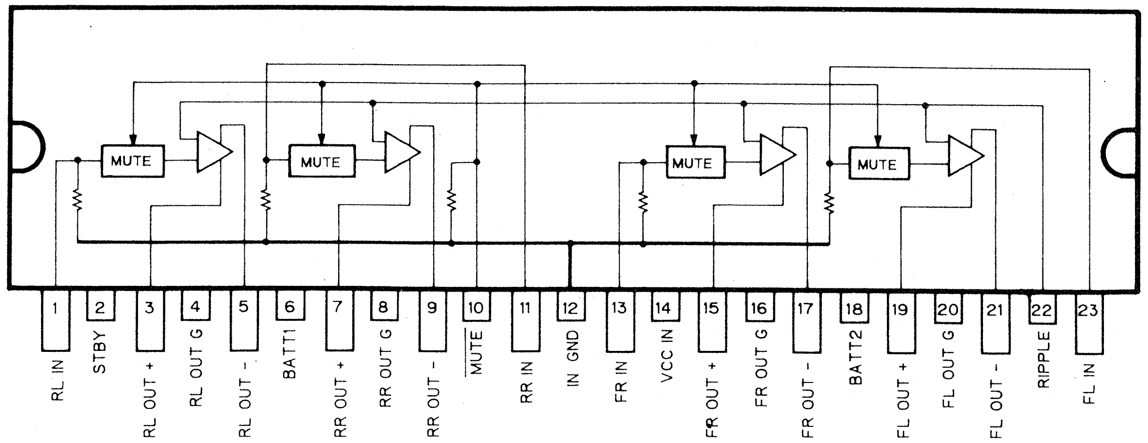
IC901:TC4069UBF


VDD 14
6A 13
6Y 12
5A 11
5Y 10
4A 9
4Y 8
1 1A
2 1Y
3 2A
4 2Y
5 3A
6 3Y
7 Vss

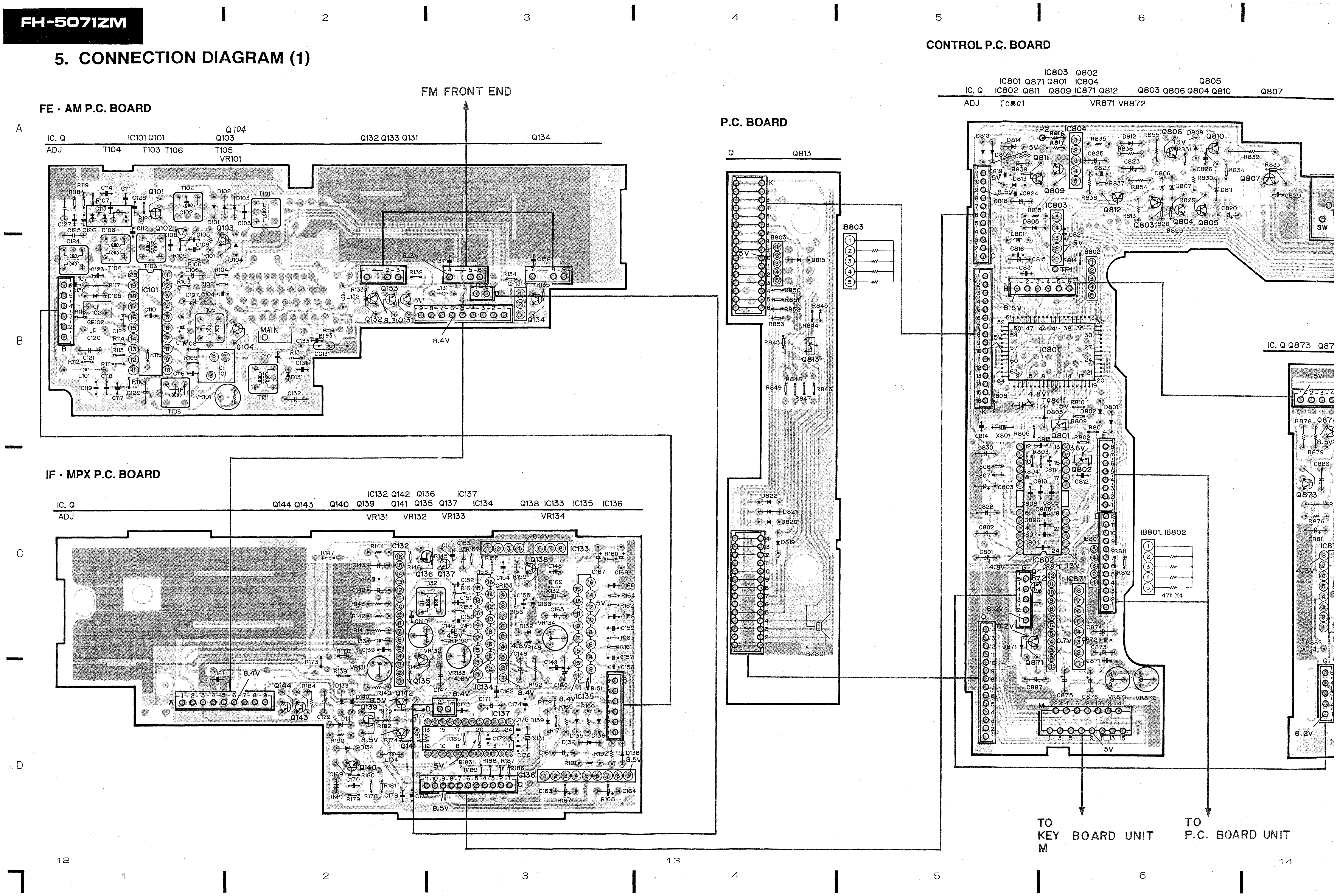
IC458:CWW1085


100
47k
2200
2200
0.01
2200
2200
6800
5600
1000
5600
4700
4700
1000
6800
330p
1000
1000
1 GND
2 VCC
4 1/2 VCC
5 IN 2
6 OUT 2
7 IN 1
8 OUT 1
9 ST/WID

IC552:PA3027A


MUTE
MUTE
MUTE
MUTE
1 RL IN
2 STBY
3 RL OUT +
4 RL OUT G
5 RL OUT -
6 BATT1
7 RR OUT +
8 RR OUT G
9 RR OUT -
10 MUTE
11 RR IN
12 IN GND
13 FR IN
14 VCC IN
15 FR OUT +
16 FR OUT G
17 FR OUT -
18 BATT2
19 FL OUT +
20 FL OUT G
21 FL OUT -
22 RIPPLE
23 FL IN

5. CONNECTION DIAGRAM (1)



FE · AM P.C. BOARD
IF · MPX P.C. BOARD
P.C. BOARD
CONTROL P.C. BOARD
FM FRONT END
MAIN
IC, Q
ADJ
IC101 Q101
Q103
Q104
T104
T103 T106
T105
VR101
Q132 Q133 Q131
Q134
Q144 Q143
Q140
IC132 Q142 Q136
Q139
Q141 Q135
IC137
Q137
IC134
Q138 IC133
IC135
IC136
VR131
VR132
VR133
VR134
Q813
IB803
IC801 Q871 IC803 Q801
IC802 Q811
Q802 IC804
Q809 IC871 Q812
Q803 Q806 Q804
Q805 Q810
Q807
TC801
VR871 VR872
IC, Q Q873
IB801, IB802
47k X4
BZ801
8.3V
8.4V
8.5V
5V
8.2V
4.8V
13V
3.6V
4.6V
4.9V
0.7V
4.3V
TO KEY BOARD UNIT M
TO P.C. BOARD UNIT
A
B
C
D
1
2
3
4
5
6

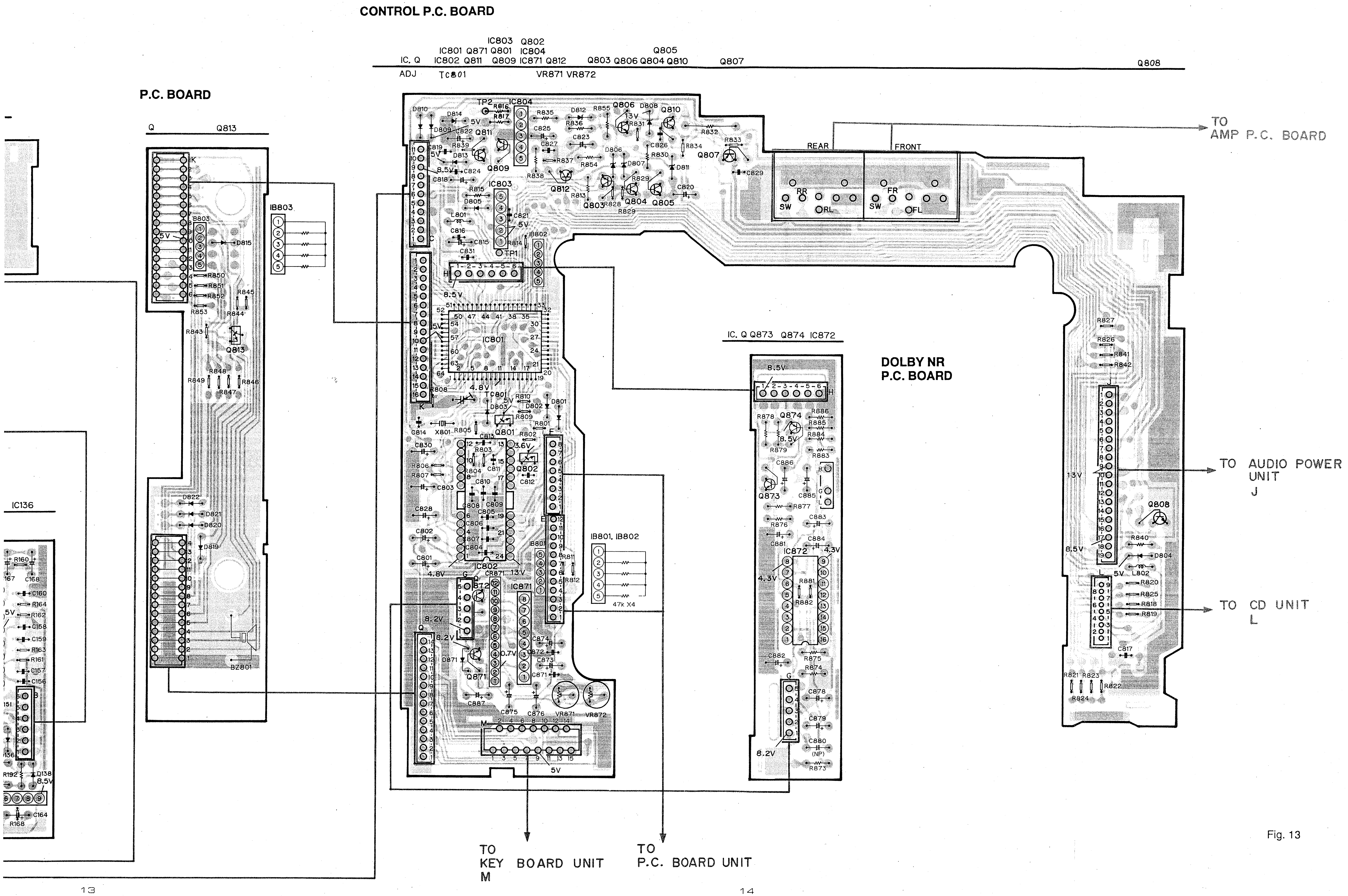

CONTROL P.C. BOARD
IC. Q
IC801 IC802
Q871 Q811
IC803 Q801 Q809
Q802 IC804 IC871 Q812
Q803 Q806 Q804
Q805 Q810
Q807
Q808
ADJ
TC801
VR871 VR872
P.C. BOARD
Q
Q813
IB803
IC136
TO AMP P.C. BOARD
REAR
FRONT
RR
SW
RL
FR
SW
FL
DOLBY NR P.C. BOARD
IC. Q Q873 Q874 IC872
IC801
IC802
IC803
IC804
IC871
IC872
IB801, IB802
47k X4
8.5V
5V
13V
4.8V
8.2V
3.6V
0.7V
4.3V
BZ801
VR871
VR872
TO AUDIO POWER UNIT J
TO CD UNIT L
TO KEY BOARD UNIT M
TO P.C. BOARD UNIT
4
5
6
7
8
9
A
B
C
D

Fig. 13

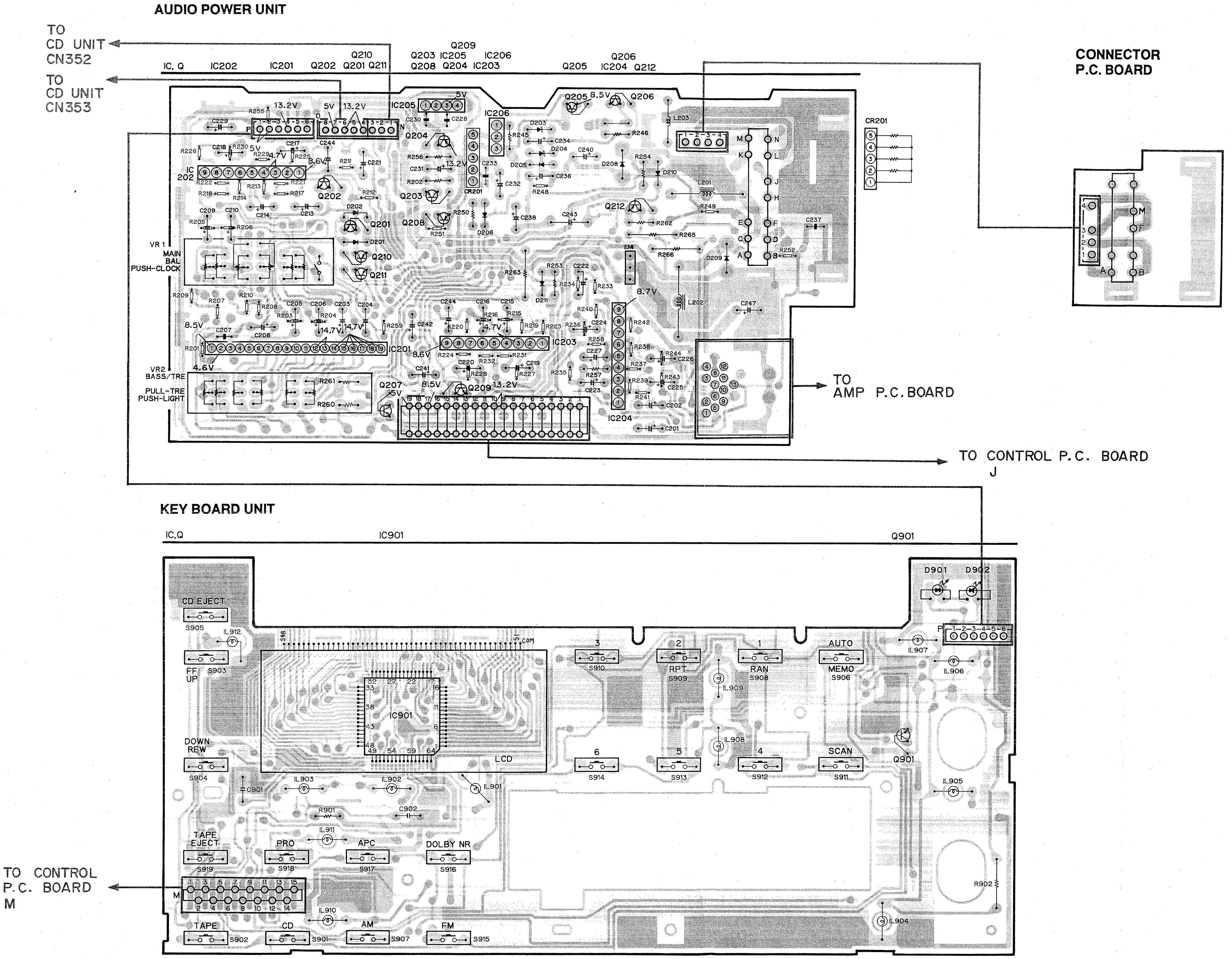
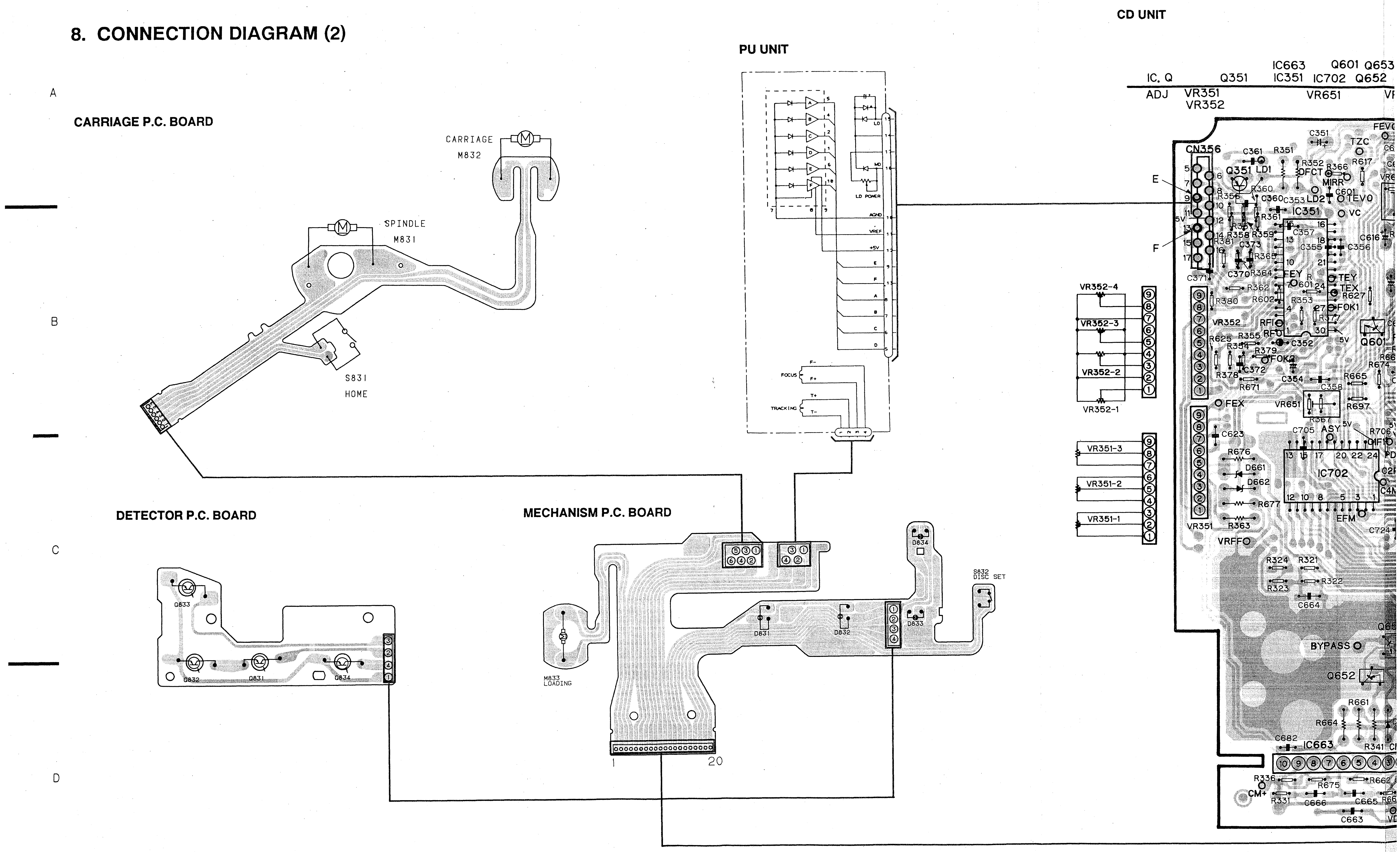

AUDIO POWER UNIT
TO CD UNIT CN352
TO CD UNIT CN353
IC, Q
IC202
IC201
Q202
Q210
Q201
Q211
Q203
Q208
Q209
IC205
Q204
IC206
IC203
Q205
Q206
IC204
Q212
CONNECTOR P.C. BOARD
CR201
VR1 MAIN BAL PUSH-CLOCK
VR2 BASS/TRE PULL-TRE PUSH-LIGHT
13.2V
5V
8.6V
4.7V
8.5V
14.7V
4.6V
8.7V
EMI
L201
L202
L203
Q207
TO AMP P.C. BOARD
TO CONTROL P.C. BOARD J
KEY BOARD UNIT
IC.Q
IC901
Q901
D901
D902
CD EJECT
S905
IL912
FF UP
S903
DOWN REW
S904
C901
IL903
IL902
IL901
LCD
R901
C902
IL911
TAPE EJECT
S919
PRO
S918
APC
S917
DOLBY NR
S916
TO CONTROL P.C. BOARD M
IL910
TAPE
S902
CD
S901
AM
S907
FM
S915
3
S910
2
RPT
S909
1
RAN
S908
AUTO
MEMO
S906
IL909
IL908
6
S914
5
S913
4
S912
SCAN
S911
IL907
IL906
IL905
IL904
R902

Fig. 14

8. CONNECTION DIAGRAM (2)


CD UNIT
PU UNIT
CARRIAGE P.C. BOARD
DETECTOR P.C. BOARD
MECHANISM P.C. BOARD
IC, Q
Q351
IC663
IC351
IC702
Q601
Q653
Q652
ADJ
VR351
VR352
VR651
CARRIAGE
M832
SPINDLE
M831
S831
HOME
FOCUS
TRACKING
LD
LD POWER
MD
AGND
VREF
+5V
E
F
A
B
C
D
Q833
Q832
Q831
Q834
D834
D831
D832
D833
S832
DISC SET
M833
LOADING
1
20
CN356
VR352-4
VR352-3
VR352-2
VR352-1
VR351-3
VR351-2
VR351-1
FEX
VRFF
BYPASS
EFM
ASY
TZC
MIRR
TEVO
VC
TEY
TEX
FOK1
FOK2
RFI
RFO
FEY
DFCT
LD1
LD2
5V

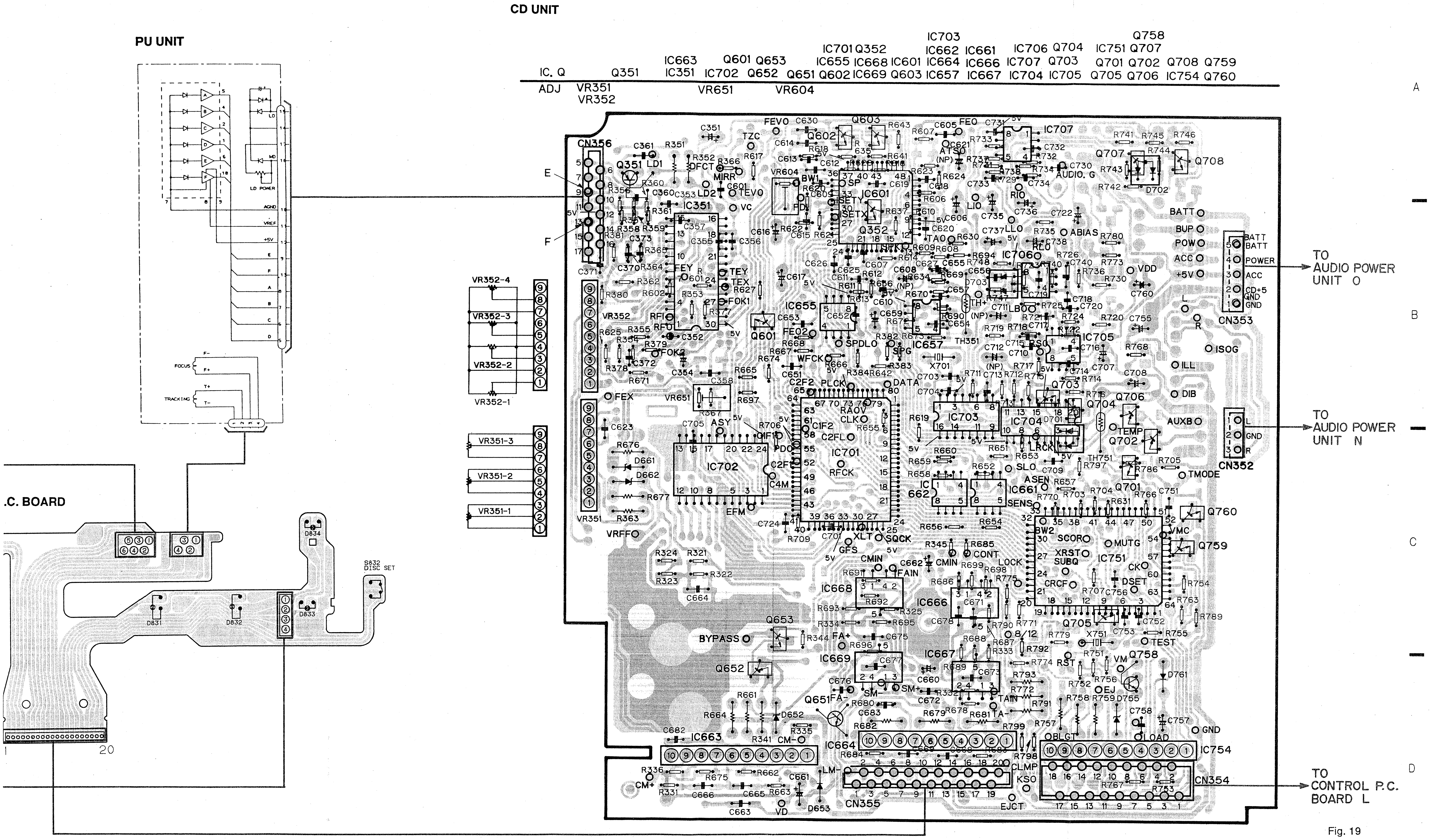

CD UNIT
PU UNIT
.C. BOARD
IC. Q
ADJ
Q351
VR351
VR352
IC663
IC351
Q601 Q653
IC702 Q652
VR651
Q651
IC701 Q352
IC655 IC668 IC601
Q602 IC669 Q603
VR604
IC703
IC662 IC661
IC664 IC666
IC657 IC667
IC706 Q704
IC707 Q703
IC704 IC705
Q758
IC751 Q707
Q701 Q702 Q708 Q759
Q705 Q706 IC754 Q760
LD POWER
FOCUS
TRACKING
CN356
CN353
CN352
CN354
CN355
VR352-4
VR352-3
VR352-2
VR352-1
VR351-3
VR351-2
VR351-1
S832 DISC SET
D831
D832
D833
D834
BATT
BUP
POW
ACC
+5V
GND
TO AUDIO POWER UNIT O
TO AUDIO POWER UNIT N
TO CONTROL P.C. BOARD L
A
B
C
D
4 5 6 7 8 9

Fig. 19

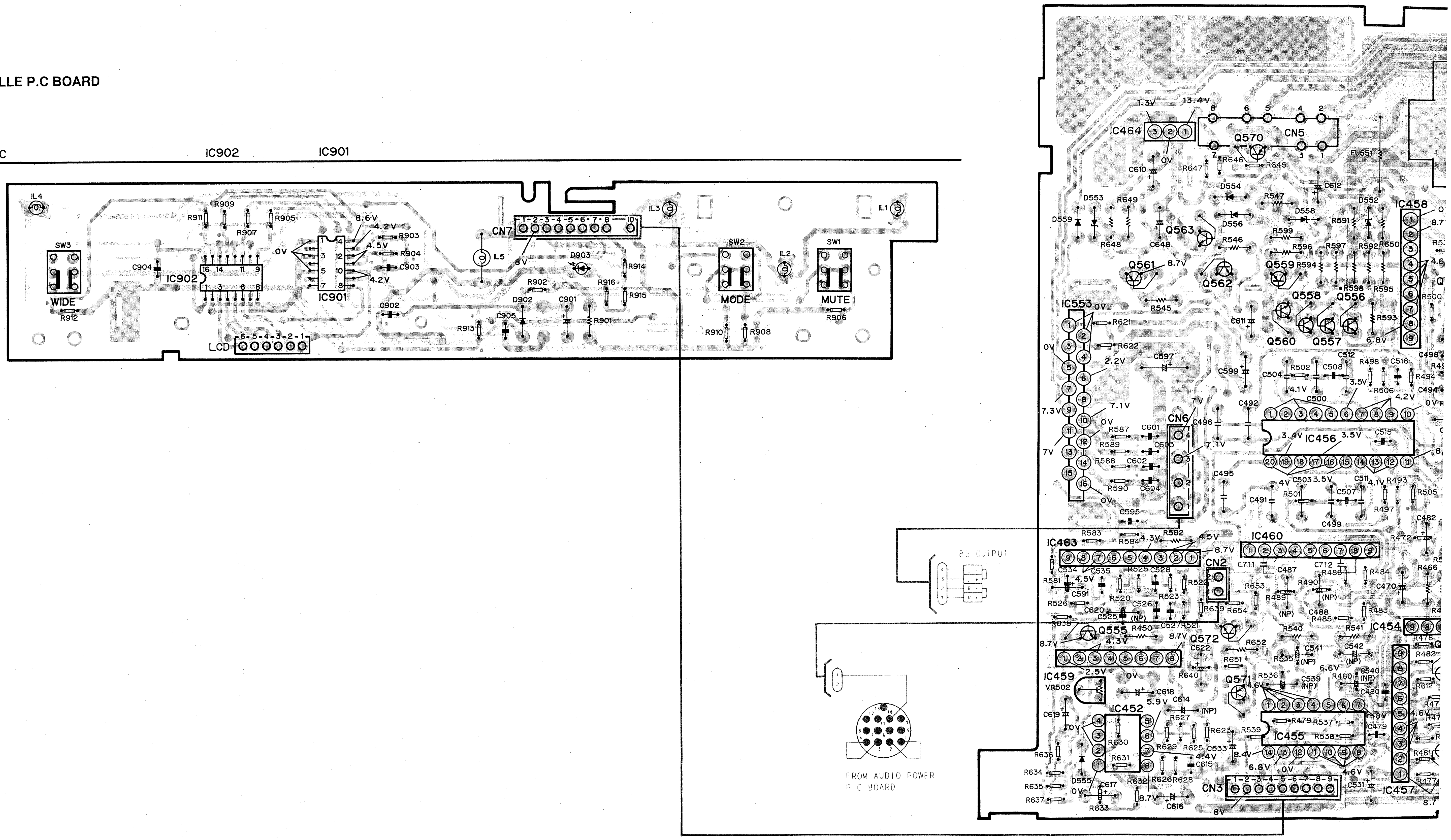
9. CONNECTION DIAGRAM (3)

AMP P.C BOARD

IC, Q	Q555 IC553	IC452 IC459 IC463	IC464 Q561	Q572 Q563	Q570 Q571 Q562	Q560 Q559 IC460	Q557 Q558 IC455	Q556 IC456	IC458 IC457
ADJ	VR502								

GRILLE P.C BOARD

IC	IC902	IC901


IL4
SW3
WIDE
R912
IC902
C904
R911
R909
R907
R905
IC901
8.6V
4.2V
4.5V
4.2V
0V
R903
R904
C903
C902
CN7
IL5
8V
D903
R902
D902
C901
C905
R913
R901
R914
R916
R915
IL3
SW2
MODE
IL2
SW1
MUTE
IL1
R910
R908
R906
LCD
IC464
1.3V
13.4V
CN5
Q570
R646
R645
R647
C610
D554
D553
R649
D559
R648
C648
Q563
D556
R546
R547
D558
C612
FU551
D552
IC458
R591
R599
R596
R597
R592
R650
Q561
8.7V
Q562
Q559
R594
R598
R595
R545
Q558
Q556
Q560
Q557
R593
6.8V
IC553
R621
R622
C597
C599
C611
2.2V
7.3V
7.1V
7V
R587
R589
R588
R590
C601
C603
C602
C604
CN6
C496
7.1V
C495
C491
R501
C503
C507
C511
R493
R505
R497
C499
C492
IC456
3.4V
3.5V
C515
C504
R502
C508
C512
R498
C516
R494
C500
4.1V
R506
4.2V
C494
C595
R583
R584
R582
4.3V
4.5V
IC463
8.7V
IC460
CN2
C711
C487
C712
R486
R484
R490
R489
C488
R485
R483
C470
R466
R472
C482
C534
C535
R525
C528
R581
C591
R522
R526
R520
R523
R653
C620
C526
C525
R639
R654
R638
Q555
R450
C527
R521
Q572
4.3V
R540
R541
IC454
C541
C542
R652
C622
R535
R651
6.6V
R480
C540
C539
R536
Q571
4.6V
C480
IC459
2.5V
VR502
C618
C614
5.9V
R640
R627
IC452
C619
R630
R631
R629
R625
R623
C533
C615
R539
R479
R537
IC455
R538
C479
4.4V
8.4V
R636
R634
R635
R637
D555
C617
R633
R632
R626
R628
C616
CN3
C531
IC457
R481
R477
BS OUTPUT
FROM AUDIO POWER P.C BOARD

AMP P.C BOARD

IC. Q	Q555 IC553	IC452 IC459 IC463	IC464 Q561	Q572 Q563	Q570 Q571 Q562	Q560 Q559 IC460	Q557 Q558 IC455	Q556 IC456	IC458 IC457	Q458 Q455 Q456 IC454	Q568	Q567	Q457 IC551	IC461	Q553 Q564 IC453	Q552 Q551 Q554	Q452	IC462	IC451	IC552 Q451
ADJ	VR502																			

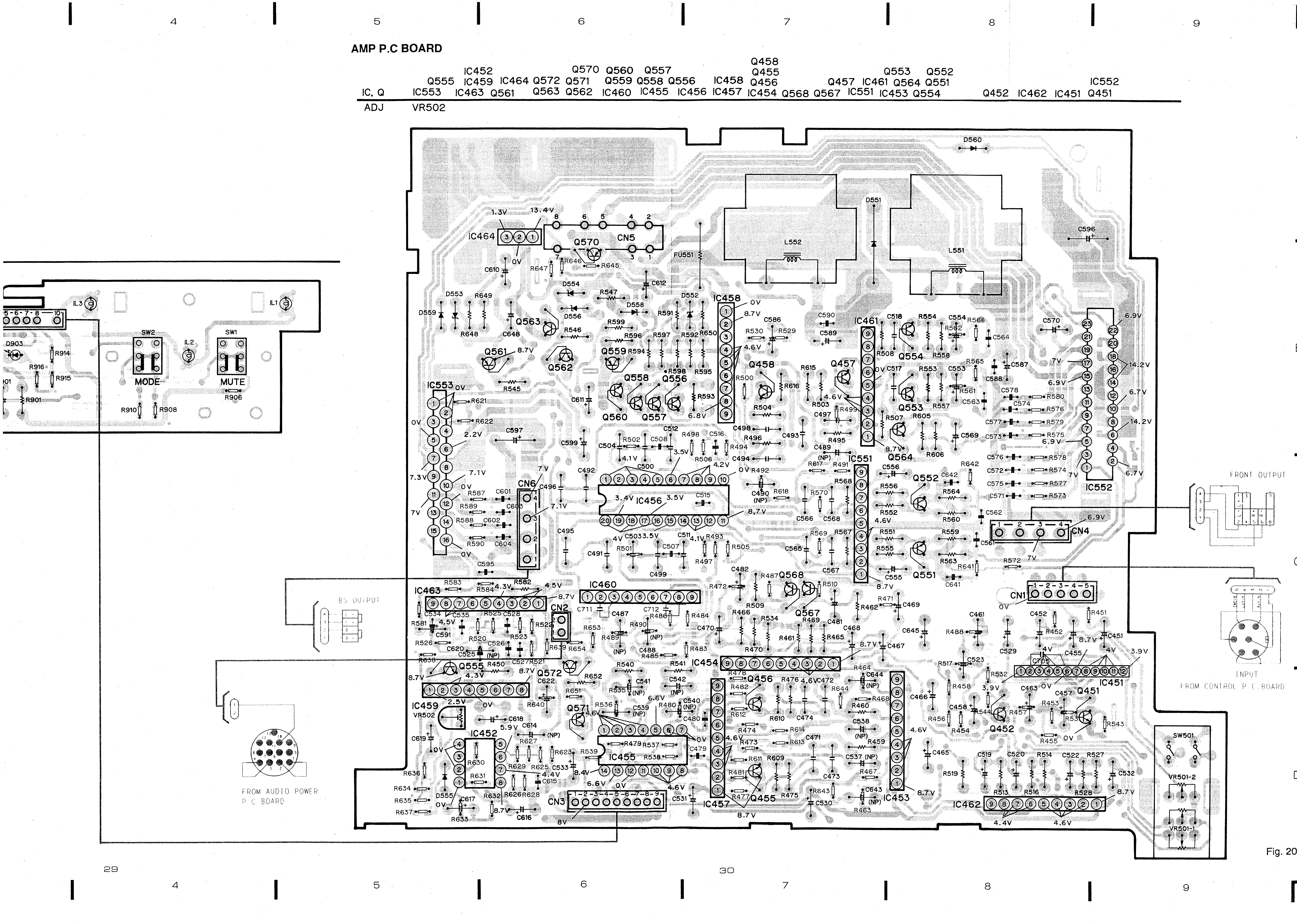

4
5
6
7
8
9
A
B
C
D
IC464
CN5
Q570
FU551
L552
L551
D551
D560
C596
IC458
IC461
IC552
IC553
IC456
CN6
IC551
Q552
Q551
CN4
FRONT OUTPUT
IC463
IC460
CN2
CN1
IC454
IC451
Q451
Q452
IC459
VR502
IC452
IC455
IC457
IC453
IC462
CN3
Q555
Q571
Q572
Q456
Q455
Q568
Q567
Q553
Q554
Q564
Q457
Q458
Q558
Q556
Q557
Q560
Q559
Q561
Q562
Q563
SW2
SW1
MODE
MUTE
IL1
IL2
IL3
D903
BS OUTPUT
FROM AUDIO POWER P.C BOARD
INPUT
FROM CONTROL P.C.BOARD
SW501
VR501-2
VR501-1
4
5
6
7
8
9

Fig. 20

10. SCHEMATIC CIRCUIT DIAGRAM (3)

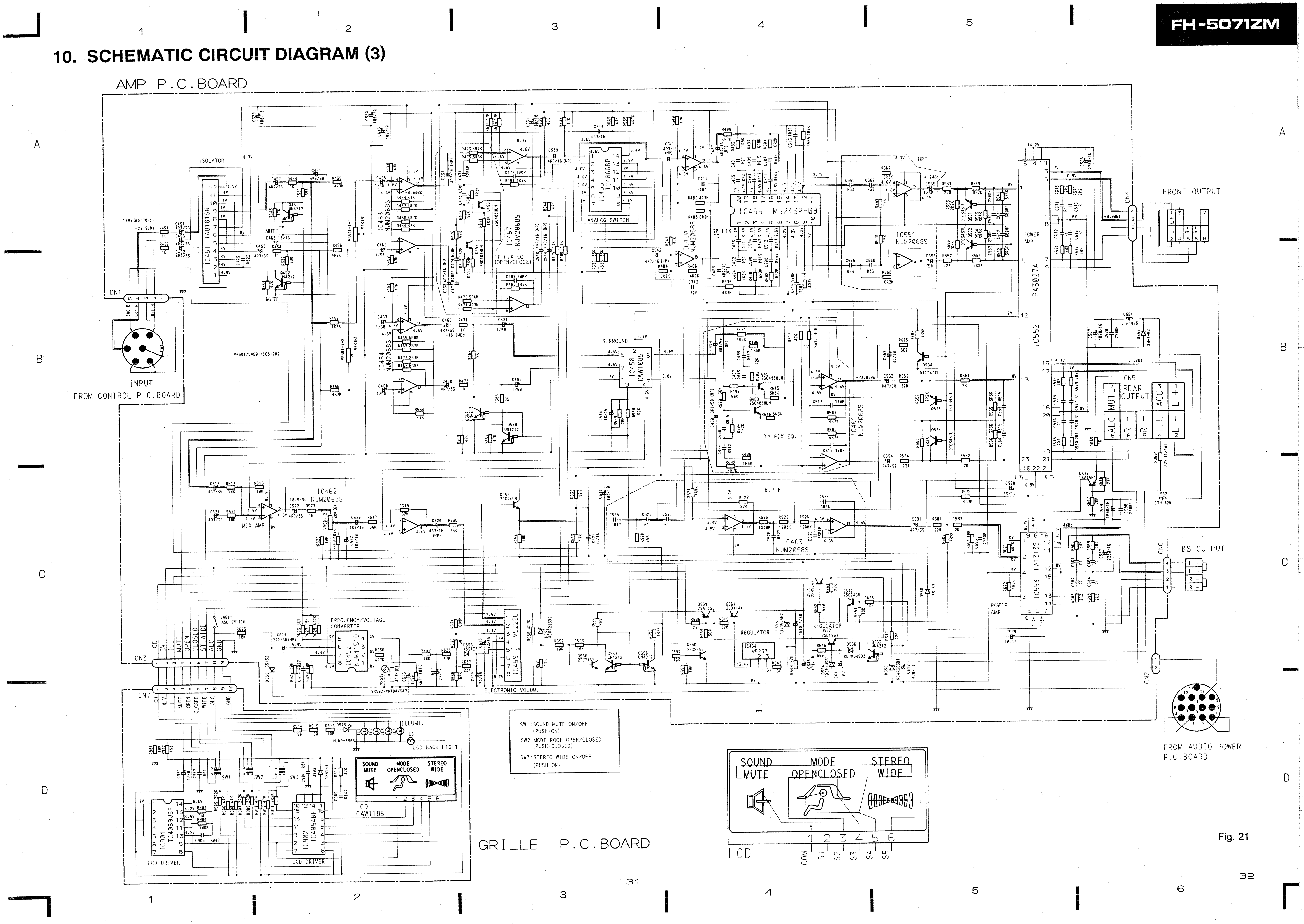
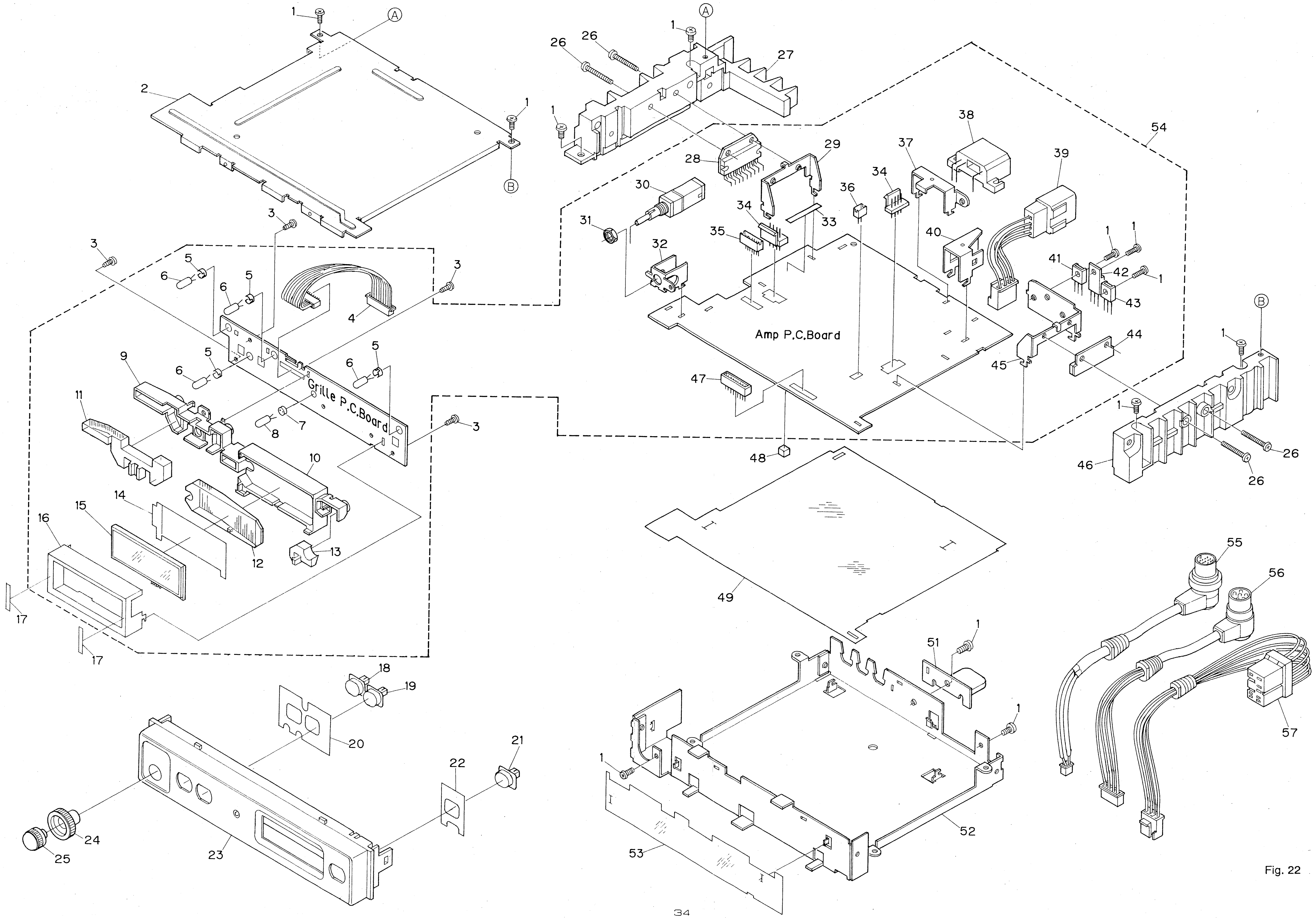

AMP P.C. BOARD
ISOLATOR
IC451 TA8181SN
MUTE
IC453 NJM2068S
IC457 NJM2068S
1P FIX EQ (OPEN/CLOSE)
IC455 TC4066BP
ANALOG SWITCH
IC460 NJM2068S
3P FIX EQ.
IC456 M5243P-09
HPF
IC551 NJM2068S
POWER AMP
IC552 PA3027A
FRONT OUTPUT
CN4
CN1
INPUT FROM CONTROL P.C.BOARD
VR501/SW501:CCS1202
IC454 NJM2068S
SURROUND
IC458 CWW1085
IC461 NJM2068S
1P FIX EQ.
CN5
REAR OUTPUT
ALC
MUTE
ILL
ACC
IC462 NJM2068S
MIX AMP
B.P.F
IC463 NJM2068S
IC553 HA13139
BS OUTPUT
CN6
SW501 ASL SWITCH
FREQUENCY/VOLTAGE CONVERTER
IC452 NJM4151D
IC459 M5222L
ELECTRONIC VOLUME
REGULATOR
IC464 M5237L
CN3
CN2
FROM AUDIO POWER P.C.BOARD
CN7
LCD BACK LIGHT
ILLUMI.
SW1
SW2
SW3
IC901 TC4069UBF
LCD DRIVER
IC902 TC4054BF
LCD DRIVER
LCD CAW1185
SOUND MUTE
MODE OPENCLOSED
STEREO WIDE
GRILLE P.C.BOARD
SW1: SOUND MUTE ON/OFF (PUSH: ON)
SW2: MODE ROOF OPEN/CLOSED (PUSH: CLOSED)
SW3: STEREO WIDE ON/OFF (PUSH: ON)
LCD
COM
S1
S2
S3
S4
S5
A
B
C
D
1
2
3
4
5
6

Fig. 21

11. CHASSIS EXPLODED VIEW (1)


1
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A
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19
20
21
22
23
24
25
Grille P.C.Board
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
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45
46
47
48
49
Amp P.C.Board
51
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56
57

Fig. 22

NOTES:
- *Parts marked by "＊" or "✱" are generally unavailable because they are not in our Master Spare Parts List.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

● Parts List

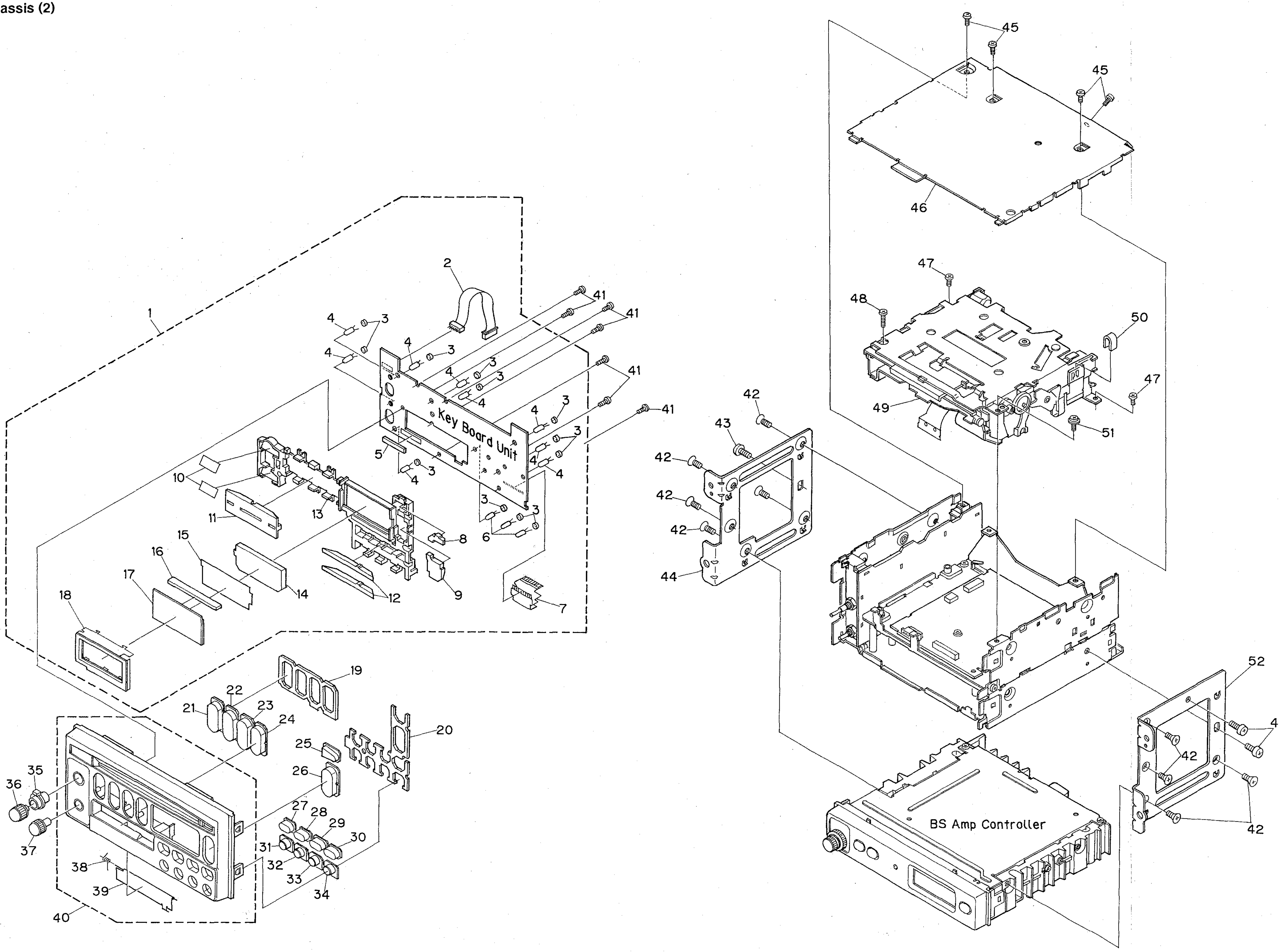
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Screw	BMZ30P050FMC		31	Nut	CBA-067
*	2	Case	CNB1617	*	32	Holder	CNC4266
	3	Screw	BPZ20P080FMC		33	Insulator	CNM3485
	4	Connector	CDE3692	*	34	Plug	CKS-557
	5	Holder	CNV2984	*	35	Plug	CKS2084
	6	Lamp(IL1−4)	CEL1302		36	Plug	CKS-566
	7	Spacer	CNV3021	*	37	Holder	CNC4264
	8	Lamp(IL5)	CEL1287		38	Plug	CKM1035
	9	Holder	CNV3164		39	Connector	CDE3693
	10	Holder	CNV3165	*	40	Holder	CNC4265
	11	Lens	CNV3162		41	Transistor(Q559)	2SA1358
	12	Lens	CNV3225		42	Transistor(Q562)	2SD1267
	13	Lens	CNV3163		43	Transistor(Q561)	2SB1144
	14	Plate	CNM3412	*	44	Holder	CNC4263
	15	LCD	CAW1185		45	IC(IC553)	HA13139
	16	Holder	CNC4361	*	46	Heat Sink	CNR1243
*	17	Spacer	CNM3551		47	Plug	CKS1042
	18	Button(MUTE)	CAC3276		48	Spacer	CNM3492
	19	Button(MODE)	CAC3277	*	49	Insulator	CNM3346
	20	Button(WIDE)	CAC3278		50	·····	
	21	Cover	CNM3483		51	Bracket	CNC4267
	22	Cover	CNM3484	*	52	Chassis	CNA1459
	23	Grille Unit	CXA5330	*	53	Insulator	CNM3486
	24	Knob	CAA1297	◉	54	Amp Unit	CWM3244
	25	Knob	CAA1296		55	Cord	CDE3738
	26	Screw	BMZ30P200FMC		56	Cord	CDE3676
*	27	Heat Sink	CNR1244		57	Connector	CDE3696
	28	IC(IC552)	PA3027A				
*	29	Holder	CNC4262				
	30	Volume(VR501/SW501)	CCS1202				

12. CHASSIS EXPLODED VIEW (2)

- **Parts List**

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
◉	1	Key Board Unit	CWM3242		31	Button(FM)	CAC3271
*	2	Connector	CDE1927		32	Button(AM)	CAC3272
	3	Spacer	CNM1993		33	Button(CD PLAY)	CAC3273
	4	Lamp(IL904－912)	CEL1302		34	Button(TAPE PLAY)	CAC3274
	5	Spacer	CNM3472		35	Knob	CAA1294
	6	Lamp(IL901－903)	CEL1292		36	Knob	CAA1293
	7	P.C.Board	CNP1806		37	Knob	CAA1295
	8	Lens	CNV3283		38	Spring	CBH1044
	9	Lens	CNV3282		39	Door	CAT1458
*	10	Sheet	CNM2110		40	Grille Unit	CXA5329
	11	Lens	CNV3280		41	Screw	BPZ20P080FMC
	12	Lens	CNV3281		42	Screw	CMZ50P080FMC
	13	Housing	CNV1776		43	Screw	BMZ50P080FMC
	14	Lens	CNV1774		44	Bracket	CNC4269
	15	Plate	CNM1973		45	Screw	BMZ30P050FMC
	16	Connector	CNV1777	*	46	Case Unit	CXA3249
	17	LCD	CWW1173		47	Screw	BMZ26P050FMC
	18	Holder Unit	CXA5115		48	Screw	PMA26P100FMC
*	19	Cushion	CNM1899	◉	49	CD Mechanism Unit	CXK2420
*	20	Cushion	CNM1900	*	50	Cushion	CNM1999
	21	Button(AUTO/SCAN)	CAC3262		51	Screw	PMF26P050FMC
	22	Button(1/4)	CAC3263		52	Bracket	CNC4268
	23	Button(2/5)	CAC3264				
	24	Button(3/6)	CAC3265				
	25	Button(CD EJECT)	CAC3275				
	26	Button(TUN)	CAC3266				
	27	Button(DOLBY NR)	CAC3267				
	28	Button(APC)	CAC3268				
	29	Button(TAPE REVERSE)	CAC3269				
	30	Button(TAPE EJECT)	CAC3270				

● Chassis (2)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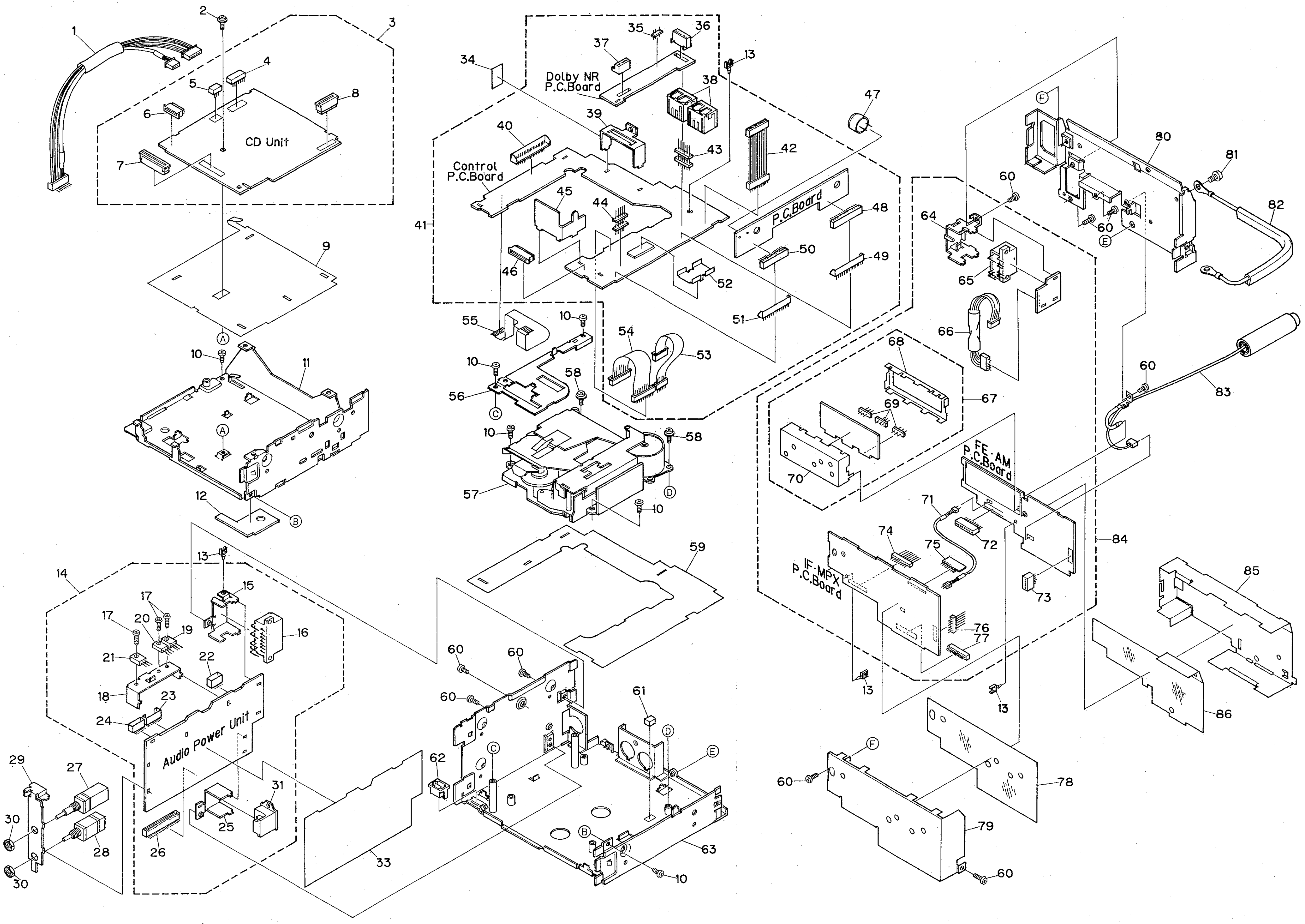
Key Board Unit
BS Amp Controller

Fig. 23

13. CHASSIS EXPLODED VIEW (3)


A
B
C
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16
17
18
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76
77
78
79
80
81
82
83
84
85
86
CD Unit
Dolby NR P.C.Board
Control P.C.Board
P.C.Board
FE·AM P.C.Board
IF·MPX P.C.Board
Audio Power Unit
Ⓐ
Ⓑ
Ⓒ
Ⓓ
Ⓔ
Ⓕ

Fig. 24

● Parts List

Mark	No.	Description	Part No.
*	1	Connector	CDE2687
	2	Screw	PMS26P050FMC
◉	3	CD Unit	CWX1231
	4	Plug	CKS-471
	5	Plug	CKS-469
	6	Plug	CKS1169
	7	Plug	CKS1443
	8	Plug	CKS1436
*	9	Insulator	CNM2547
	10	Screw	BMZ26P050FMC
*	11	Chassis	CNA1275
*	12	Spacer	CNM2016
	13	Clamper	CNV1335
◉	14	Audio Power Unit	CWM3416
*	15	Bracket	CNC3018
	16	Plug	CKM1036
	17	Screw	BMZ30P060FMC
*	18	Bracket	CNC3019
	19	Transistor(Q206)	2SC3421
	20	Transistor(Q205)	2SA1358
	21	IC(IC205)	AN7805R
*	22	Plug	CKS2082
*	23	Plug	CKS-771
*	24	Plug	CKS2080
*	25	Bracket	CNC2081
*	26	Connector	CKS-677
	27	Volume(VR2)	CCS1205
	28	Volume(VR1)	CCS1211
	29	Bracket	CNC2084
	30	Nut	NK70FMC
	31	Connector	CKS1513
	32	·····	
	33	Insulator	CNM1894
*	34	Insulator	CNM1895
	35	Plug	CKS-092
	36	Connector	HKS-195
*	37	Connector	HKS-194
	38	Connector	CKS1507
*	39	Bracket	CNC2082
*	40	Plug	CKS-658
◉	41	Control Unit	CWM3246
*	42	Connector	CDE1924
*	43	Plug	CKS1515
*	44	Plug	CKS1514
*	45	Bracket	CNC2115
	46	Connector	CKS1175
	47	Buzzer(BZ801)	CPV1005
*	48	Connector	CKS-674
*	49	Plug	CKS-655
*	50	Plug	CKS-672
*	51	Plug	CKS-653
*	52	Heat Sink	CNG-368
*	53	Connector	CDE2077
*	54	Connector	CDE2078
	55	P.C.Board	CNP1968
*	56	Bracket	CNC2083
◉	57	Cassette Mechanim Assy	CXK1695
	58	Screw	PMF26P050FMC
*	59	Insulator	CNM1893
	60	Screw	BMZ30P050FMC
*	61	Spacer	CNM2251
	62	Guide	CNV1823
*	63	Chassis	CNA1224
*	64	Bracket	CNC2079
	65	Plug	CKM1035
*	66	Connector	CDE1928
	67	FM Front End	CWB1005
*	68	Case	CNG-082
	69	Plug	CKS-601
*	70	Case	CNG-083
*	71	Connector	CDE1925
*	72	Plug	CKS1485
*	73	Plug	CKS1482
*	74	Plug	CKS1593
	75	IC(IC133)	KHA505A
*	76	Plug	CKS1516
*	77	Plug	CKS2081
*	78	Insulator	CNM1897
*	79	Case	CNC2117
*	80	Case	CNB1197
	81	Screw	BMZ50P060FMC
	82	Cord	CDE1713
	83	Antenna Cable	CDH1160
◉	84	Tuner Unit	CWE1286
*	85	Case	CNC2116
*	86	Insulator	CNM1896

14. CD MECHANISM UNIT EXPLODED VIEW

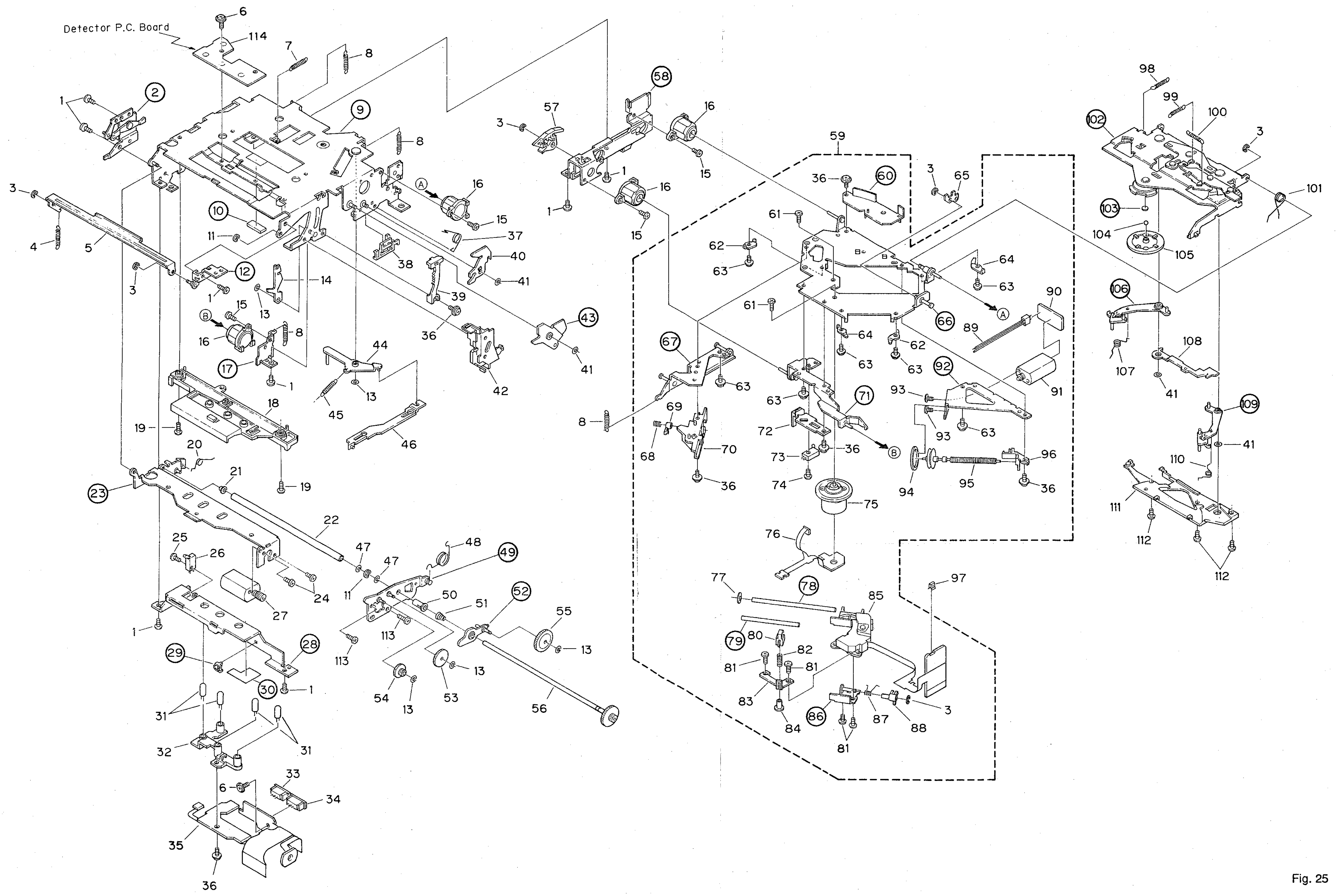
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Fig. 25

- **Parts List**

Mark	No.	Description	Part No.
	1	Screw	BMZ26P030FMC
	2	Bracket Unit	CXA3469
	3	Washer	YE15FUC
	4	Spring	CBH1137
	5	Arm	CNC2858
	6	Screw	CBA1076
	7	Spring	CBH1136
	8	Spring	CBH1182
	9	Chassis Unit	CXA3392
	10	Cushion	CNM2068
	11	Washer	YE20FUC
	12	Bracket Unit	CXA2986
	13	Washer	CBF-166
	14	Cam	CNV2535
	15	Screw	CBA1118
	16	Damper Unit	CXA3339
	17	Bracket	CNC1926
	18	Guide	CNV2221
	19	Screw	CBA1131
	20	Spring	CBH1299
	21	Bearing	CNV1884
	22	Roller	CNV2225
	23	Arm Unit	CXA2983
	24	Screw	HBA-175
	25	Screw	CBA1070
	26	Switch	CSN1020
	27	Motor Unit	CXA2129
	28	Bracket	CNC2859
	29	Holder	CNV2511
	30	Insulator	CNM2560
	31	LED	SLR-981A
	32	Holder	CNV2226
	33	Connector	CKS-719
	34	Connector	CKS-721
	35	P.C.Board	CNP2178
	36	Screw	CBA1075
	37	Spring	CBH1336
	38	Holder	CNV1633
	39	Gear	CNV2302
	40	Arm	CNV2451
	41	Washer	CBF1022
	42	Cover	CNV2452
	43	Arm Unit	CXA3393
	44	Arm	CNV2506
	45	Spring	CBH1343
	46	Lever	CNV2505
	47	Washer	HBF-126
	48	Spring	CBH1133
	49	Bracket Unit	CXA2982
	50	Bearing	CNV2224
	51	Spring	CBH1181
	52	Arm Unit	CXA2994
	53	Gear	CNV1628
	54	Gear	CNV1627
	55	Gear	CNV1629
	56	Gear Unit	CXA2990
	57	Arm	CNV2510
	58	Bracket Unit	CXA2984
◉	59	Carriage Mechanism Unit	CXA3474
	60	Guide	CNV1782
	61	Screw	HBA-163
	62	Holder	CNC1738
	63	Screw	PMS20P030FMC
	64	Holder	CNC1739
	65	Arm Unit	CXA3441
	66	Chassis Unit	CXA2991
	67	Bracket Unit	CXA2992
	68	Spring	CBH1104
	69	Spacer	CNV1844
	70	Holder	CNV2485
	71	Holder Unit	CXA2993
	72	Holder	CNV2229
	73	Switch	CSN1018
	74	Screw	CBA1070
	75	Motor Unit	CXM1054
	76	P.C.Board	CNP2383
	77	Cushion	CNV1863
	78	Shaft	CLA1197
	79	Shaft	CLA1196
	80	Holder	CNV1512
	81	Screw	CBA1062
	82	Spring	CBH1105
	83	Holder	CNC1736
	84	Screw	CLA1319
	85	PU Unit	CGY1015
	86	Holder Unit	CXA1860
	87	Spring	CBH1106
	88	Rack	CNV1513
	89	Connector	CDE2849
	90	P.C.Board	CNP2384
	91	Motor Unit	CXA3347
	92	Bracket	CNC3288
	93	Screw	CBA-098
	94	Belt	CNT1020
	95	Screw Unit	CXA2375
	96	Holder	CNV1781
	97	Short Pin	CBL1010
	98	Spring	CBH1292
	99	Spring	CBH1297
	100	Spring	CBH1296
	101	Spring	CBH1294
	102	Arm Unit	CXA3470
	103	Spacer	CNM1787
	104	Ball	CNR1079
	105	Clamper	CNV2411
	106	Arm Unit	CXA3471
	107	Spring	CBH1295
	108	Arm	CNV2228
	109	Arm Unit	CXA3472
	110	Spring	CBH1293
	111	Guide	CNV2223
	112	Screw	CBA1084
	113	Screw	BMZ20P030FMC
	114	P.C.Board	CNP2367

15. CASSETTE MECHANISM ASSY EXPLODED VIEW (X-0 Mechanism)

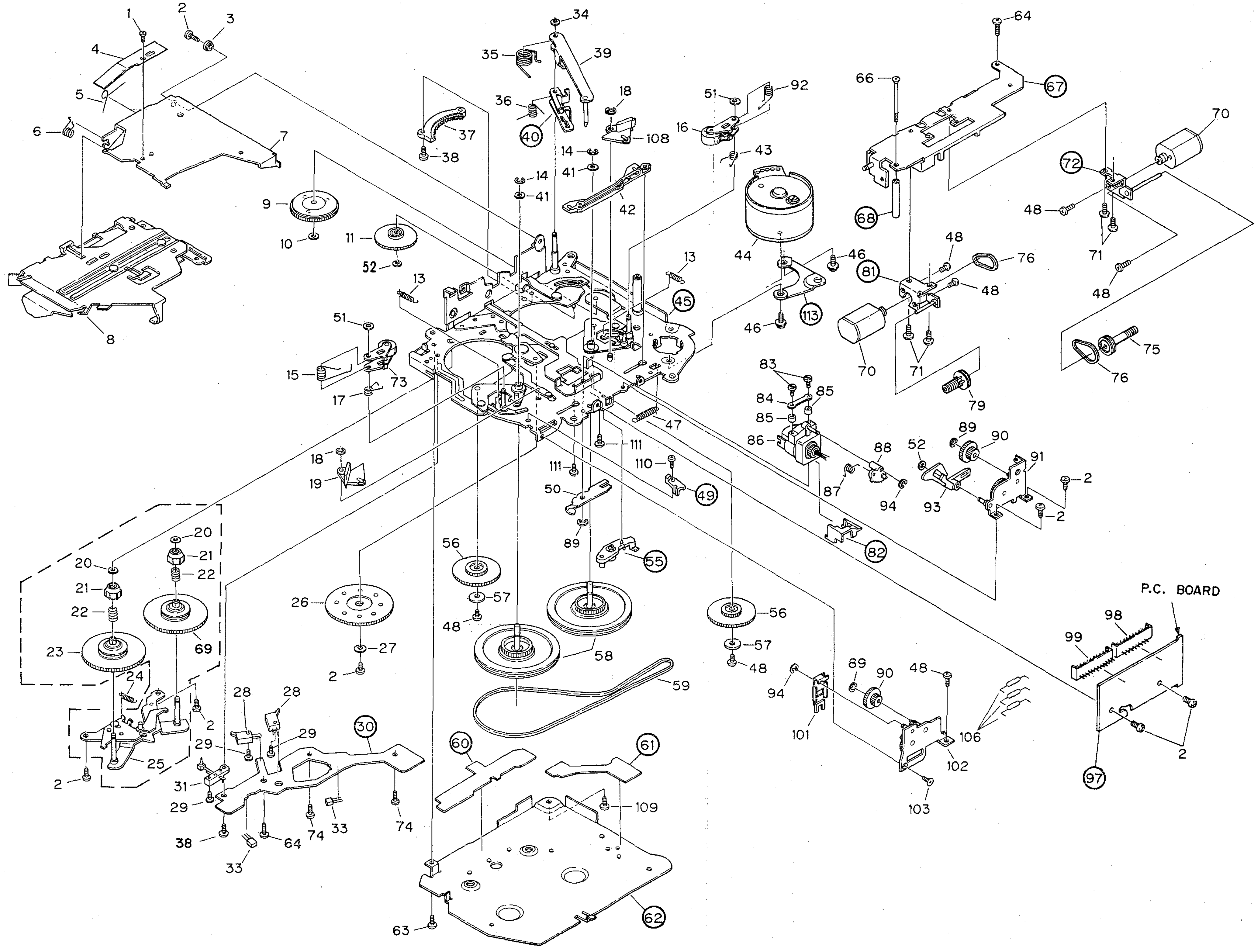
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Fig. 26

- **Parts List**

Mark	No.	Descruption	Parts No.
	1	Screw(M1.4×1.4)	HBA-147
	2	Screw	BMZ20P040FMC
	3	Bush	CLB-663
	4	Spring	CBE1023
	5	Spring	CBH-867
	6	Spring	CBH-837
	7	Arm	CNC2373
	8	Holder Unit	CXA4526
	9	Gear Unit	CXA2088
	10	Washer	CBF1026
	11	Gear	CNY-271
	12	Reel Uint	CXA4025
	13	Spring	CBH-835
	14	Washer	CBG1003
	15	Spring	CBH1277
	16	Pinch Roller Unit	CXA2608
	17	Spring	CBH1197
	18	Washer	YE25FUC
	19	Arm	CNV1254
	20	Washer	CBF1022
	21	Collar	CNW-932
	22	Spring	CBH-827
	23	Reel Unit	CXA4024
	24	Spring	CBH-868
	25	Bracket Unit	CXA1481
	26	F/R Gear	CNW-944
	27	Collar	CLA1109
	28	Switch(70μS,CST IN)	CSN1023
	29	Screw(M1.7×5.5)	CBA1025
	30	P.C.Board	CNL-745
	31	Switch(CST SET)	CSN-089
	32	·····	
	33	Magnetic Resistive	DM-106B
	34	Washer	CBF-046
	35	Spring	CBH-887
	36	Spring	CBH-886
	37	Gear	CNV1075
	38	Screw(M2×5)	CBA1054
	39	Arm Unit	CXD-389
	40	Arm Unit	CNG-618
	41	Washer	HBF-179
	42	Lever	CNV1257
	43	Spring	CBH1196
	44	Moter(Capstan)	CXM1055
	45	Chassis Unit	CXA2808
	46	Screw	PMS26P035FMC
	47	Spring	CBH-830
	48	Screw(M2×2.5)	HBA-175
	49	Spacer	CNW-945
	50	Spring	CBL1050
	51	Wacher	CBF1025
	52	Wacher	CBF-126
	53	·····	
	54	·····	
	55	Clamper	CNV1079
	56	Gear	CNV1616
	57	Coller	CLA1238
	58	Flywheel	CNV1572
	59	Belt	CNT1046
	60	Insulator	CNN-332
	61	Insulator	CNN-333
	62	Cover	CNG-625
	63	Screw	BMZ20P030FMC
	64	Screw(M1.7×6.0)	CBA1125
	65	·····	
	66	Screw(M2×25)	CBA-165
	67	Guide	CNC2219
	68	Spacer	CNC1651
	69	Reel Unit	CXA4023
	70	Motor Unit (FF/REW,Head)	CXA3596

Mark	No.	Descruption	Parts No.
	71	Screw	HBA-174
	72	Bracket Unit	CXA2605
	73	Pinch Roller Unit	CXA2609
	74	Screw(M2×2.5)	CBA1037
	75	Pulley	CNV1255
	76	Belt	CNT1047
	77	·····	
	78	·····	
	79	Pulley	CNV1256
	80	·····	
	81	Bracket Unit	CXA2606
	82	Cover	CNV1489
	83	Screw(M1.4×8)	CBA1169
	84	Spring	CBE-114
	85	Azimuth Rubber	CNY-134
	86	Head Unit	CXA2462
	87	Spring	CBH-829
	88	Gear	CNW-939
	89	Washer	YE12FUC
	90	Gear	CNV1262
	91	Holder Assy	CXA5014
	92	Spring	CBH1276
	93	Arm	CNV1495
	94	Washer	YE15FUC
	95	·····	
	96	·····	
	97	P.C.Board	CNP2155
	98	Connector(8P)	CKS1055
	99	Connector(12P)	CKS1059
	100	·····	
	101	Arm	CNH-004
	102	Holder Assy	CXA5013
	103	Screw(M2×2)	HBA-209
	104	·····	
	105	·····	
	106	Diode	1S1555
	107	·····	
	108	Arm	CNV1253
	109	Screw(M2×7)	CBA1060
	110	screw(M2×4)	CBA1015
	111	Screw(M2×2.5)	CBA1041
	112	·····	
	113	Bracket	CNC2324

16. ELECTRICAL PARTS LIST

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

Chip Resistor

RS1/□S□□□J,RS1/□□S□□□J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

Tuner Unit

Consists of
Connector P.C.Board
FE·AM P.C.Board
IF·MPX P.C.Board

Unit Number :
Unit Name : Tuner Unit

MISCELLANEOUS

======Circuit Symbol & No.	Part Name======	Part No.
IC 101		LA1137N
IC 132		KHA141A
IC 133		KHA505A
IC 134		LA2110
IC 135		LA3430P
IC 136		TA75558S
IC 137		LC7218HS
Q 101		2SK435
Q 102 135 138		2SC1740S
Q 103 104 131 133 134		XDC124ES
Q 132 143 144		XDA114ES
Q 136		2SJ105
Q 137 140		2SC3113
Q 139		2SK330
Q 141 142		2SA1150
D 101 102 103 104 105 132 133 135 136 137		1SS133
D 106		KV1280F1-2
D 131		1SV99
D 134		RD3R0ESB2
D 138 139 140		1SS133
D 141		RD5R1JSB2
L 101	Ferri-Inductor	CTF-157
L 131 132 133 134	Ferri-Inductor	LAU150K
T 101	Coil	CTB-149
T 102	Coil	CTB-171
T 103	Coil	CTB1025
T 104	Coil	CTB1026
T 105	Coil	CTE1017
T 106	Coil	CTE1018
T 107	Coil	CTB1024
T 131	Transformer	CTC-195
T 132	Coil	CTC1029
CG 131	Surge Protector	DSP-301NS00B
CF 101	Filter	CTF-100
CF 102	Ceramic Resonator	CTF1039
CF 131	Ceramic Filter	CTF-182
CR 133		CWW-107
X 131	Crystal Resonator	CSS1030
X 132	Ceramic Resonator	CSS1022
VR 101	Semi-fixed 1kΩ (B)	VRTB4VS102
VR 131 132 134	Semi-fixed 22kΩ (B)	VRTB4VS223
VR 133	Semi-fixed 10kΩ (B)	VRTB4VS103
	FM Front End	CWB1005
RESISTORS		
R 101		RD1/4PS152JL
R 102 107 113 114 120 149 150		RS1/10S103J
R 103 133		RS1/10S471J
R 104 154		RS1/10S682J
R 105 135		RS1/10S330J
R 106		RS1/10S220J
R 108		RS1/10S394J
R 109 176 177 185 186 187 188 189		RS1/10S222J
R 110 146 160 161 162 178 183		RS1/10S472J
R 111		RS1/10S153J
R 112		RS1/10S333J
R 115		RS1/10S513J
R 116 167 168		RS1/10S101J
R 117		RD1/4PS562JL
R 118 119 145 170 171 172 173		RS1/10S104J
R 131		RS1/10S681J
R 132		RS1/8S4R7J
R 134		RS1/8S223J
R 139 158 180 181		RS1/10S102J
R 140		RD1/4PS331JL
R 141		RD1/4PS183JL
R 142		RD1/4PS682JL
R 143		RD1/4PS392JL
R 144		RD1/4PS472JL
R 147		RS1/10S474J
R 148		RD1/4PS223JL
R 151		RS1/10S183J
R 152 182		RD1/4PS222JL
R 153		RS1/10S392J
R 155		RS1/10S563J
R 156		RS1/10S393J
R 157 159		RS1/10S473J
R 163 164		RS1/10S332J
R 165 166		RD1/4PS333JL
R 169		RS1/10S334J
R 174 175		RS1/10S223J
R 179		RS1/10S152J
R 184		RD1/4PS103JL
R 190		RD1/4PS104JL
R 191 192		RD1/4PS224JL
R 193		RS1/10S0R0J
CAPACITORS		
C 101 104 108 109 110 116 117 123 139 140		CKSQYB223K25
C 102 111 113		CCSQCH100D50
C 103		CKSYB223K25
C 105 126		CCSQCH220J50
C 106 147		CEA101M10LS
C 107 115 142 143 168 180		CEA010M50LS2
C 112		CCSQCH010C50
C 114 118		CKSYB333K25
C 119		CKSYB104K25
C 120		CEA4R7M35LS
C 121 165		CEA3R3M50LS
C 122		CEAR47M50LS2
C 124		CQPAH751G2A
C 125		CCSQCH390J50
C 127		CQPAH101G2A
C 128 133 137 144 150 151 154 170 172		CKSQYB103K50
C 129 153 161		CEA470M16LS
C 130		CCSQSL270J50
C 131 156 177		CKSQYB222K50
C 132 171 179		CEA100M25LS
C 138		CKSQYB123K50
C 141		CCSQCH180J50
C 145		CEA4R7M16NPLL
C 146		CASA330K16
C 148		CEA2R2M50LS2
C 149		CKSYB473K25
C 152		CKSQYB182K50
C 155 159 160		CKSQYB332K50
C 157 158		CKSQYB183K25
C 162		CKSQYB102K50
C 163 164		CEAR22M50LS2
C 166 178 181		CKSQYB223K25
C 167		CSZAR22K35
C 169	4.7μF/16V	CCH1005
C 173 174		CCSQCH101J50
C 175 176		CCSQCH270J50

Unit Number :
Unit Name : Audio Power Unit

MISCELLANEOUS

IC 201		KHA125
IC 202 203 204		TA75558S
IC 205		AN7805R
IC 206		M5236L
Q 201 202		DTC343TS
Q 203 211		XDC124ES
Q 204		2SB1243
Q 205		2SA1358
Q 206		2SC3421
Q 207 209		XDC114ES
Q 208		2SB1357
Q 210		XDA124ES
Q 212		2SA1429
D 201 202 205 206		1SS133
D 203		RD9R1JSB2
D 204		RD6R8JSB3
D 208 209		SM-3-02
D 210 211		ERA15-02VH
L 201 202	Coil	CTH1053
L 203	Ferri-Inductor	CTF-157
CR 201		CWW1131
EMI	Filter	CCG1004
RESISTORS		
R 201		RS1/10S393J
R 202		RD1/4PS222JL
R 203 204		RS1/10S102J
R 205 206		RS1/10S222J
R 207 208 217 218 219 220 223 224		RS1/10S472J
R 209 210 234		RS1/10S472J
R 211 233		RS1/10S392J
R 212		RS1/8S472J
R 213 214 215 216 237		RS1/10S333J
R 221 222		RS1/10S182J
R 225 226 227 228 241 242		RS1/10S101J
R 229 230 231 232 243 244		RS1/10S223J
R 235 236 239		RS1/10S103J
R 238		RS1/8S333J
R 240 258		RS1/8S103J
R 245		RD1/4PS221JL
R 246		RD1/4PS561JL
R 248 249		RS1/8S152J
R 250		RD1/2VS102JL
R 251		RS1/8S223J
R 252		RS1/8S102J
R 253 254		RD1/4PS101JL
R 255		RS1/10S223J
R 256		RD1/4PS223JL
R 257		RD1/4PS103JL
R 259		RS1/10S0R0J
R 262		RD1/4PS223JL
R 263		RD1/2PS681JL
R 265		RD1/2PS271JL
R 266	Fuse Resistor	CCN1064
CAPACITORS		
C 201 202 203 204		CEA100M16LS2
C 205 206		CEA2R2M50LS2
C 207		CKSYF105Z25
C 208 222 227		CEAS101M10
C 209		CEAR22M50LS2
C 210		CEAR22M50LS2
C 213 214 234		CEAS010M50
C 215 216		CEA010M50LS2
C 217 218 223 224 225 226		CEA4R7M35LS
C 219 220		CEAS4R7M35
C 221 244		CEA101M10LS
C 228		CKSQYB223K25
C 229 232		CEAS221M10
C 230		CKSQYB153K50
C 231 238		CEAS470M25
C 233 237		CKSYB473K25
C 236		CEAS100M50
C 240 241 242 247	1000μF/16V	CCH1003
C 243	2200μF/16V	CCH-123

Unit Number :
Unit Name : Key Board Unit

IC 901		LC7582ASP
Q 901		DTC144TF
D 901 902	LED	AA5553K
IL 901 902 903	Lamp 60mA 8V	CEL1292
IL 904 905 906 907	908 Lamp 65mA 14V	CEL1302
IL 909 910 911 912	Lamp 65mA 14V	CEL1302
S 901 902 903 904	905906 907 908 Switch	CSG-253
S 909 910 911 912	913914 915 916 Switch	CSG-253
S 917 918 919	Switch	CSG-253
	LCD	CWW1173
R 901		RD1/4PS104JL
R 902		RN1P1R5JL
C 901		CKPYB331K50L
C 902		CKPYF223Z25L

======Circuit Symbol & No. Part Name====== Part No.

Amp Unit

Consists of
Amp P.C.Board
Grille P.C.Board

Unit Number :
Unit Name : Amp Unit

MISCELLANEOUS

Circuit Symbol & No.	Part Name	Part No.
IC 451		TA8181SN
IC 452		NJM4151D
IC 453 454 457 460 461 462 463 551		NJM2068S
IC 455		TC4066BP
IC 456		M5243P-09
IC 458		CWW1085
IC 459		M5222L
IC 464		M5237L
IC 552		PA3027A
IC 553		HA13139
IC 901		TC4069UBF
IC 902		TC4054BF
Q 451 452 557 558 563 567 568		UN4212
Q 455 456 457 458		2SC4038LN
Q 551 552 553 554 564		DTC343TL
Q 555		2SC2458
Q 556 560		2SC2459
Q 559		2SA1358
Q 561		2SB1144
Q 562		2SD1267
Q 570		2SA1561
Q 571		2SB1243
Q 572		2SC2458
D 551		SM-3-02
D 552		RD8R2JSB2
D 553		RD7R5JSB2
D 554		RD9R1JSB1
D 555 559 902		1SS133
D 556		RD7R5JSB3
D 558		RD4R3ESB1
D 560		1SS133
D 903	LED	HLMP-8305
L 551	Choke Coil	CTH1075
L 552	Choke Coil	CTH1020
VR501/SW501	Volume/Switch 50kΩ(B),20kΩ(B)	CCS1202
VR 502	Semi-fixed 4.7kΩ(B)	VRTB4VS472
FU 551	Fuse Resistor	CCN1062
IL 1 2 3 4	Lamp 65mA 14V	CEL1302
IL 5	Lamp 100mA 8V	CEL1287
SW 1 2 3	Switch	CSG-248
	LCD	CAW1185

RESISTORS

Circuit Symbol & No.	Part Name	Part No.
R 450 513 514 516 528 591 592 593		RD1/4PS103JL
R 451 452 471 472 645		RS1/10S102J
R 453 454		RS1/10S102J
R 455 456 457 458		RS1/10S472J
R 459 460 461 534 540 541		RD1/4PS473JL
R 462		RD1/4PS202JL
R 463 464 537 538 638		RS1/10S333J
R 465 466		RD1/4PS682JL
R 467 468		RS1/10S472J
R 469 470		RD1/4PS272JL
R 473 474 481 482 485 486 488 489 490 491		RS1/10S472J
R 475 476		RD1/4PS562JL
R 477 478 499 500 520		RS1/10S563J
R 479 480		RS1/10S103J
R 483 484 501 502		RS1/10S822J
R 487 510 535 536 543 544 613 614 617 618		RS1/10S473J
R 492 505 506 539 572 621 622 629		RS1/10S472J
R 493 494		RS1/10S182J
R 495 496		RD1/4PS152JL
R 497 498		RS1/10S682J
R 503 504 609 610		RD1/4PS122JL
R 507 508 595 650		RD1/4PS472JL
R 509		RD1/4PS202JL
R 517		RS1/10S363J
R 519		RD1/4PS623JL
R 521		RS1/10S394J
R 522 637		RS1/10S223J
R 523 525 526		RS1/10S124J
R 527		RD1/4PS102JL
R 529 646 647		RS1/10S203J
R 530		RS1/10S122J
R 531 532		RS1/10S391J
R 545 547 551 552 553 554 649		RD1/4PS221JL
R 546 599 605		RD1/4PS561JL
R 555 556 557 558 582		RD1/4PS222JL
R 559 560 567 568		RD1/4PS822JL
R 561 562 583		RS1/10S202J
R 563 564 615 616		RD1/4PS332JL
R 565 566 611 612		RS1/10S332J
R 569 570		RS1/10S153J
R 573 574 575 576 577 578 579 580 587 588		RS1/8S2R2J
R 581		RS1/10S221J
R 584 623 626 627 628 632 639 640		RS1/10S103J
R 589 590		RS1/8S2R2J
R 594 597 598 901		RD1/4PS103JL
R 596		RD1/4PS223JL
R 606		RD1/4PS752JL
R 625		RS1/10S563J
R 630		RS1/10S472J
R 631		RS1/10S104J
R 633 643 644 906 908 910 912 913		RS1/10S473J
R 634		RS1/10S684J
R 635		RS1/10S151J
R 636		RS1/10S683J
R 641 642		RS1/10S562J
R 648		RD1/4PS153JL
R 651		RS1/10S223J
R 652		RD1/4PS561JL
R 653 654		RS1/10S103J
R 902 914 915		RS1/10S151J
R 903		RS1/10S105J
R 904		RS1/10S104J
R 905 907 909 911		RS1/10S222J
R 916		RS1/10S101J

CAPACITORS

Circuit Symbol & No.	Part Name	Part No.
C 451 452 455 457 458 469 470 522 523 591		CEAS4R7M35
C 461		CEAS3R3M50
C 463 536 570 611 622		CEAS100M16
C 465 466 467 468 481 482 555 556		CEAS010M50
C 471 472		CQMA822J50
C 473 474		CKCYB681K50
C 479 480 515 516		CCSQCH101J50
C 487 488 537 538 539 540 541 542		CEA4R7M16NPLL
C 489 490		CEA0R1M50NPLL
C 491 492		CQEA274J63

======Circuit Symbol & No.	Part Name======	Part No.
C 493 494		CQMA123J50
C 495 496		CQMA124J50
C 497 498 499 500		CQMA153J50
C 503 504 511 512		CQMA473J50
C 507 508		CKSYB393K25
C 517 518		CKCYB101K50
C 519 520		CEAS4R7M35
C 525		CKSQYB473K16
C 526 527 571 572 573 574 575 576 577 578		CKSQYF104Z25
C 528		CKSQYB223K50
C 529 530 531 532 533 645		CEAS101M10
C 534		CKSQYB563K25
C 535		CKSQYB332K50
C 553 554		CEASR47M50
C 561 562 588 590 595		CKSQYB222K50
C 563 564		CKSYB153K50
C 565 566 567 568		CQEA334J63
C 569		CEAS470M10
C 587 589		CEAS102M16
C 596	2200 μF/16V	CCH1012
C 597	2200 μF/16V	CCH-123
C 599		CEAS100M16
C 601 602 603 604		CKSQYF104Z25
C 610 616		CEAS010M50
C 612 648		CEAS471M10
C 614		CEA2R2M50NPLL
C 615		CKSQYB273K50
C 617 618 619		CEAS220M16
C 620		CEA4R7M16NPLL
C 641 642		CKSQYB682K50
C 643 644		CEA4R7M16NPLL
C 705		CKDYB222K50
C 711 712		CKDYB101K50
C 901		CEA010M50LL
C 902 904		CKSQYB103K50
C 903 905		CKSQYB473K16

Control Unit
Consists of Control P.C.Board Dolby NR P.C.Board P.C.Board

Unit Number :
Unit Name : Control Unit

MISCELLANEOUS

Circuit Symbol & No.	Part Name	Part No.
IC 801		PD4155D
IC 802		PA3022
IC 803		M51953BL
IC 804		M51957BL
IC 871		M51522AL
IC 872		CXA1102P
Q 801 802 813		2SC2712
Q 803 805		2SC1740S
Q 804 806 809 871 872 873		XDC124ES
Q 807		2SA1358
Q 808		2SD1640
Q 810 811		2SD1864
Q 812 874		2SA1048
D 801 802 803 804 805 809 810 813 815 819		1SS133
D 806 808		RD6R8JSB3
D 807		RD22JSB1
D 811 814		RD6R2JSB2
D 812		RD7R5JSB2
D 820 821 822 871		1SS133
L 801 802	Ferri-Inductor	LAU150K

======Circuit Symbol & No.	Part Name======	Part No.
TC 801	Trimmer	CCG-070
CR 871		CWW1087
IB 801 802 803		CWW1048
X 801	Crystal Resonator	CSS1023
VR 871 872	Semi-fixed 470 Ω (B)	VRTB4VS471

RESISTORS

Circuit Symbol & No.	Part Name	Part No.
R 801 805 809 810 811 812 846 847 848 849		RS1/10S472J
R 802		RS1/10S392J
R 803		RS1/10S684J
R 804		RS1/10S562J
R 806 807 808 814 828 881 882		RS1/10S473J
R 813 815 816		RD1/4PS473JL
R 817 830		RD1/4PS104JL
R 818 819 820 825		RS1/10S681J
R 821 822 823 824		RS1/10S682J
R 826 827 831 839 841 842		RS1/10S103J
R 829 837 844 845		RS1/10S223J
R 832		RS1P561JL
R 833		RS1/8S223J
R 834		RS1/8S222J
R 835 855 879 883 884		RD1/4PS102JL
R 836 838		RD1/4PS561JL
R 840		RS1P101JL
R 843		RS1/8S561J
R 850 851 852 853		RS1/10S472J
R 854		RD1/4PS332JL
R 873		RD1/4PS101JL
R 874		RD1/4PS433JL
R 875 877		RD1/4PS103JL
R 876 878		RD1/4PS223JL
R 885 886		RD1/4PS821JL

CAPACITORS

Circuit Symbol & No.	Part Name	Part No.
C 801 802 818 820 822 825		CEA220M16LS
C 803 830		CEA101M16LL
C 804		CKSYB223K25
C 805 806 807 808 809 810		CKSYF473Z50
C 811 814		CCSQCH330J50
C 812		CKSQYB392K50
C 813 829		CKSYF104Z25
C 815		CEA470M16LS
C 816 831		CKSQYF473Z25
C 817 819 821 824 826 827		CKSQYB223K25
C 823		CEA010M50LS2
C 828 883 884		CEAR68M50LS2
C 871 872		CKSQYB561K50
C 873 874		CEANL4R7M35LL
C 875 876		CEAS470M16
C 878 882 887		CEA101M10LS
C 879 880		CEA010M50NPLL
C 881		CEAR15M50LS2
C 885 886		CEA4R7M35LS

Unit Number :
Unit Name : CD Unit

MISCELLANEOUS

Circuit Symbol & No.	Part Name	Part No.
IC 351		CXA1081M
IC 601		CXA1082BQ
IC 655 657 661 662 706 707		M5218FP
IC 663 664		LA6515
IC 666 667 668 669		LA6501-FA
IC 701		CXD1135Q
IC 702		LH5116HN-10T
IC 703		SM5807ES-M
IC 704		LC7881MBM
IC 705		UPC358G2

======Circuit Symbol & No.	Part Name======	Part No.
IC 751		PD4253
IC 754		M54546AL
Q 351		2SB1243
Q 352 705 760		UN2211
Q 601 701		UN2211
Q 602 603 707 708		2SD1048
Q 651		2SC3474
Q 652 759		UN2111
Q 653		2SC2712
Q 702 706		UN2111
Q 703 704		UN2215
Q 758		2SD1859
D 652		HZS11JB1
D 653		RB100AVH
D 661 662		HZS2ALL
D 701 703		MA151WA-MN
D 702		MA151WA-MN
D 755		HZS6R8JB3
D 761		ERA15-02VH
TH 351	Thermister	CCX1001
TH 751	Thermister	CCX-021
X 701	Crystal Resonator	CSS1052
X 751	Ceramic Resonator	CSS-042
VR 351	Semi-fixed	CCP1005
VR 352	Semi-fixed	CCP1006
VR 604	Semi-fixed2.2kΩ (B)	CCP1015
VR 651	Semi-fixed47kΩ (B)	CCP1023

RESISTORS

======Circuit Symbol & No.	Part Name======	Part No.
R 321 744 770 771 790 797		RS1/10S222J
R 322 774		RS1/10S333J
R 323 631 636 642 652 657 690		RS1/10S272J
R 324 699 741 742		RS1/10S102J
R 325 707		RS1/10S0R0J
R 331 663		RS1/10S5R6J
R 332 334 691 695 709		RS1/10S103J
R 333 335 336 683 684 687 693 696		RS1/10S2R2J
R 341		RD1/4PS221JL
R 344 367 637 643 673		RS1/10S473J
R 345		RS1/10S472J
R 351		RD1/4PS120JL
R 352		RD1/4PS100JL
R 353 381 651 653 655 658 659 723 724 740		RS1/10S102J
R 354 378 616 628		RS1/10S153J
R 355		RS1/10S113J
R 356 357		RS1/10S563J
R 358 359 669		RS1/10S563J
R 360 608		RS1/10S823J
R 361 383 685		RS1/10S823J
R 362 763		RS1/10S564J
R 363		RD1/4PS223JL
R 364 365 618 671		RS1/10S105J
R 366 665		RS1/10S562J
R 377		RS1/10S562J
R 379 705		RS1/10S332J
R 380 625		RS1/10S203J
R 382 667		RS1/10S363J
R 384 630		RS1/10S273J
R 601 602		RS1/10S101J
R 606 623		RS1/10S224J
R 607		RS1/10S683J
R 609 619		RS1/10S104J
R 610		RS1/10S113J
R 611		RS1/10S432J
R 612		RS1/10S623J
R 613		RS1/10S624J
R 614		RS1/10S104J
R 617		RS1/10S203J
R 620 654 656 660		RS1/10S272J

======Circuit Symbol & No.	Part Name======	Part No.
R 621		RS1/10S184J
R 622 670 755 768		RS1/10S103J
R 624 666		RS1/10S393J
R 627 725 726 773 780		RS1/10S104J
R 634		RS1/10S474J
R 635		RS1/10S752J
R 641		RS1/10S113J
R 661 664 679		RD1/4PS103JL
R 662 675 678 680 688 689 692 703 751 752		RS1/10S103J
R 668		RS1/10S183J
R 672		RS1/10S364J
R 674		RS1/10S133J
R 676 677		RD1/4PS201JL
R 681 682		RD1/4PS2R2JL
R 686 698		RS1/10S223J
R 694		RS1/10S822J
R 697		RS1/10S473J
R 704 729 745 746		RS1/10S472J
R 706		RS1/10S0R0J
R 711 712 719 720		RS1/10S511J
R 713 714		RS1/10S181J
R 715 716		RS1/10S244J
R 717 718		RS1/10S102J
R 721 722 786		RS1/10S822J
R 730		RS1/10S682J
R 731 732 733 734 735 736		RN1/10SE472D
R 737 738		RN1/10SE472D
R 743 775 792		RS1/10S222J
R 747		RS1/10S391J
R 748 753 754 756 766 767 779		RS1/10S681J
R 772 793		RD1/4PS333JL
R 789		RS1/10S821J
R 791		RD1/4PS104JL
R 798 799		RS1/10S151J

CAPACITORS

======Circuit Symbol & No.	Part Name======	Part No.
C 351 707 722 737 738 755 760		CEA101M6R3LS
C 352 672 676 683 710 730 758		CKSQYB103K50
C 353 654		CKSQYB333K25
C 354		CASA150M6R3
C 355 611 625 626 652 682		CKSQYB103K50
C 356		CKSQYB332K50
C 357 614 630 663 664 665 666 671		CKSYB224K25
C 358 607 668 669 675 677		CKSYB473K50
C 360 361 651 653		CKSYB224K25
C 370 373		CCSQCH220J50
C 371 615		CKSQYB102K50
C 372		CCSQCH150J50
C 601		CKSQYB222K50
C 605 656		CKSYB104K25
C 606 616		CEA220M16LS
C 608		CEALNP220M6R3
C 609 715 716 756		CKSQYB472K50
C 610		CCSQCH221J50
C 612 620 678 701 705		CKSYB104K25
C 613		CKSQYB333K25
C 617		CEA4R7M50LS
C 618		CKSQYB272K50
C 619		CKSQYB182K50
C 621		CEALNP4R7M35
C 623		CKSQYB222K50
C 627		CCSQCH220J50
C 655		CCSQSL681J50
C 657		CKSYB393K25
C 659		CEA100M25LS
C 660		CASA100M6R3

======Circuit Symbol & No.	Part Name======	Part No.
C 661	470 μF/16V	CCH-114
C 662		CEA100M25LS
C 673		CKSYB224K25
C 703 704		CCSQCH090D50
C 708		CEA101M6R3LS
C 709 740		CKSYB103K50
C 711 712		CEALNP330M10
C 713 714		CKSYB683K25
C 717 718		CCSQCH471J50
C 719 720		CKSQYB822K50
C 724		CKSQYB222K50
C 731 732		CCSQCH331J50
C 733 734		CCSQCH331J50
C 735 736		CEA330M6R3LS
C 751		CKSYF105Z25
C 752 753		CCSQCH300J50
C 757		CEA6R8M35LS

Unit Number :
Unit Name : Carriage P.C.Board

M 831	Motor Unit(Spindle)	CXM1054
M 832	Motor Unit(Carriage)	CXA3347
S 831	Switch(Home)	CSN1018

Unit Number :
Unit Name : Mechanism P.C.Board

D 831 832 833 834	LED(Disc Detect)	SLR-981A
M 833	Motor Unit(Loading)	CXA2129
S 832	Switch(Disc Set)	CSN1020

======Circuit Symbol & No.	Part Name======	Part No.

Unit Number :
Unit Name : Detector P.C.Board

Q 831 832 833 834	Photo-Transistor	PH102

Unit Number :
Unit Name : Switch P.C.Board

S 1	Switch(CST SET)	CSN-089
S 2 3	Switch(CST IN,70 μS)	CSN1023
MR 1 2	Magnetic Resistive Device	DM-106B

Unit Number :
Unit Name : P.C.Board Unit

D 1 2 3		1S1555

Miscellaneous Parts List

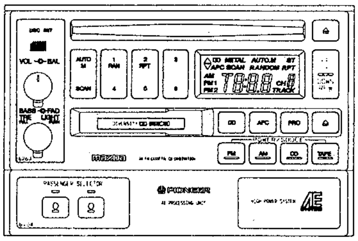
	PU Unit	CGY1015
HD 1	Head Unit	CXA2462
M 1 2	Motor Unit(Head,FF/REW)	CXA3596
M 3	Motor(Capstan)	CXM1055
BZ 801 (P.C.Board)	Buzzer	CPV1005
VR 1 (Audio Power Unit)	Volume/Switch 50kΩ(M),50kΩ(N),20kΩ(C)×2	CCS1211
VR 2 (Used Audio Power Unit)	Volume 50kΩ(B)×2	CCS1205

2407

Service Manual

PIONEER
The future of sound and vision.

- DEH-K4041ZM



ORDER NO.
CRT 1196

TUNER DECK · CD AMPLIFIER
DEH-K4041ZM US
DEH-K4141ZM US
TUNER DECK · CD PLAYER
DEX-K4141ZM-91 US
AE AMPLIFIER
XF-4041ZM-91 US
XF-4141ZM-91 US

- **These models have been installed in MAZDA RX-7.** US

	MAZDA No.
DEH-K4041ZM	FC04 66 9W0
DEH-K4141ZM	FC32 66 9W0
DEX-K4141ZM-91	FC04 66 AC0
XF-4041ZM-91	FC04 66 AF0
XF-4141ZM-91	FC32 66 AF0

These models are used in combination with GM-4041ZM and GM-4141ZM.

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- **DEX-K4141ZM-91, XF-4041ZM-91 and XF-4141ZM-91 are supplementary model number. These are identical to the DEH-K4041ZM and DEH-K4141ZM except for the addition of the following items.**

Description	AM FM CASSETTE CD COMBINATION DEX-K4141ZM-91	AE PROCESSING UNIT XF-4041ZM-91	AE PROCESSING UNIT XF-4141ZM-91
Carton	CHG1573	CHG1574	CHG1575
Styrofoam	CHP1206	—	—
Styrofoam	CHP1207	—	—
Cover	CEG1042	CEG1051	CEG1051
Installation Manual	CRB1119	CRB1119	CRB1051
Bracket	CNC2770	CNC2358	CNC2358
Bracket	CNC2771	—	—
Bracket	CNC2498	—	—
Screw	BMZ50P080FMC	—	—
Screw	CBA1096	—	—
Holder	CNC2531	—	—
Polyethylene Bag	CEG1041	—	—
Screw Assy	No spare part	No spare part	No spare part
Screw	BMZ30P050FMC	—	—
Screw	BMZ50P080FMC	—	—
Screw	CMZ50P080FMC	—	—

Note:

- **See the separate manual CX-173 (CRT1161) for the CD mechanism description.**
- **See the service manual CDX-3 (CRT1177) for CD mechanism circuit description.**
- **See the separate manual CX-156 (CRT-468) for the cassette mechanism description.**
- **Dolby and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.**
- **Noise Reduction System manufactured under license from Dolby Laboratories Licensing Corporation.**

1. SPECIFICATIONS

Power source	DC 13.2V (10 ~ 15V allowable)
Grounding system	Negative type
Weight	3.8kg [8.4lbs.]

Tape Player

Tape	Compact cassette tape (C-30 ~ C-90)
Tape speed	4.76cm/sec. (+0.14cm/sec., −0.05cm/sec.)
Wow & flutter	Less than 0.2% (WRMS)
Frequency response	0±5dB (10kHz/315Hz) 0±4dB (125Hz/1kHz) 0±5dB (10kHz/1kHz) −4.5±3dB (70µs, 10kHz)
S/N	More than 45dB
Channel separation	More than 35dB

FM Tuner

Frequency range	87.9 ~ 107.9MHz
Usable sensitivity	Less than 15dBµ (mono)
S/N	More than 50dB (30%mod., input 54dBµ)
Distortion	Less than 1.5% (30%mod., input 54dBµ)
Stereo separation	More than 20dB (1kHz, input 60dBµ)

AM Tuner

Frequency range	530 ~ 1,710kHz
Usable sensitivity	Less than 32dBµ
1-signal selectivity	More than 40dB

CD Player

Distortion	Less than 0.03% (1kHz)
S/N	More than 75dB
Frequency response	−2.5±1dB (20Hz/1kHz) 0±1dB (20kHz/1kHz)

AE

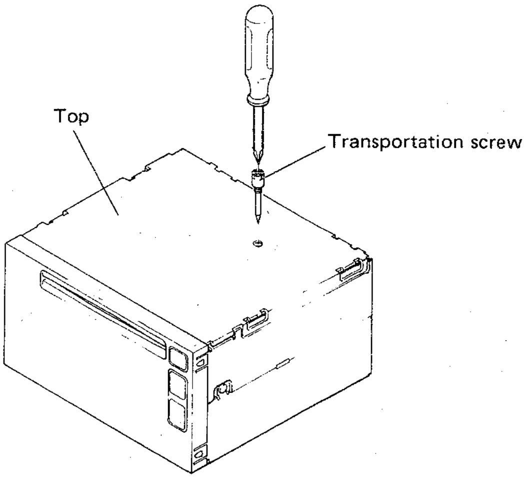
Distortion	Less than 0.3% (−10dBs output, 100Hz)
Separation	More than 38dB (185mV output, 100Hz)
Frequency response	
(280Hz/100Hz)	−2.5±2dB (DEH-K4041ZM)
(280Hz/100Hz)	−3±2dB (DEH-K4141ZM)
(750Hz/100Hz)	+2.5±2dB
(1.4kHz/100Hz)	−7±2dB
(20kHz/100Hz)	+1.5±2dB (DEH-K4041ZM)
(20kHz/100Hz)	+0.5±2dB (DEH-K4141ZM)
Voltage gain	0±2dB (−10dBs output, 100Hz)

AMP

Continuous power output	More than 11W (10% dist. at 1kHz)
Front voltage gain (L)	35±2dB (0dBs output at 1kHz) (DEH-K4041ZM)
(L)	34.3±2dB (0dBs output at 1kHz) (DEH-K4141ZM)
(R)	37±2dB (0dBs output at 1kHz)
Rear voltage gain	29±2dB (0dBs output at 1kHz)
Frequency response	−0.5±2dB (0dBs output 100Hz/1kHz)
Distortion	Less than 0.1% (+10dBs output at 1kHz)

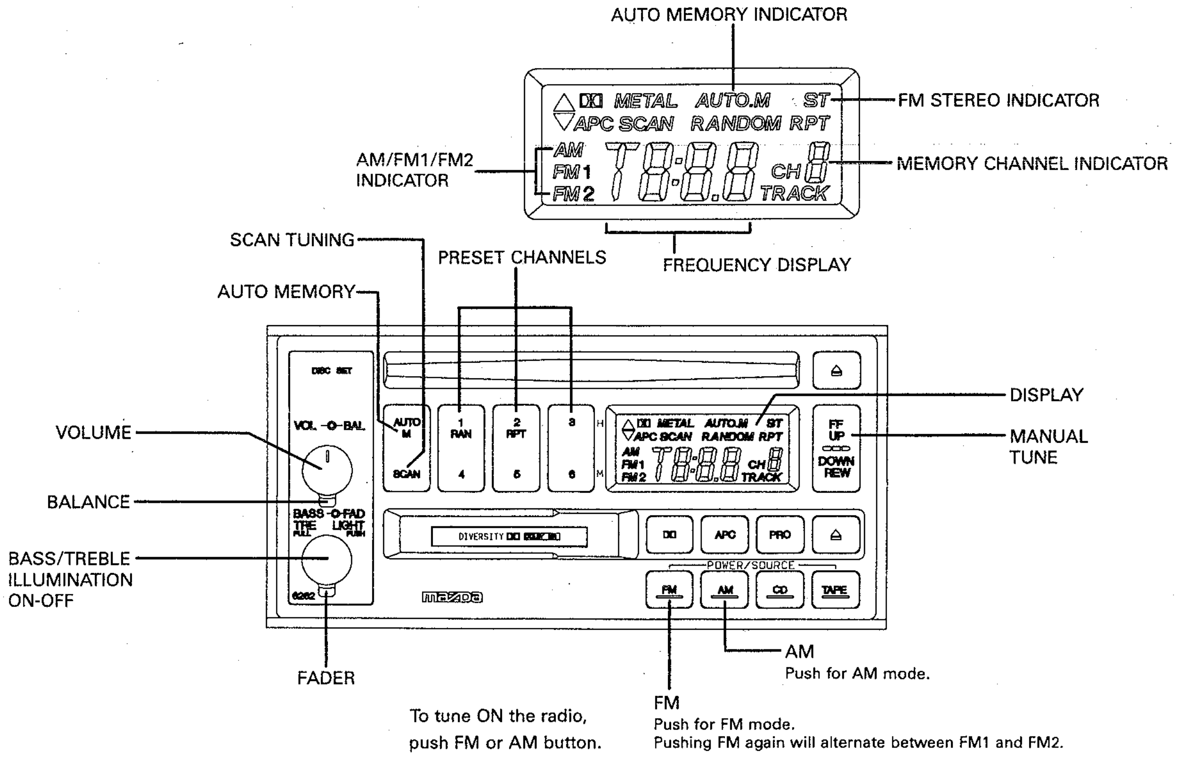
• CD Player Service Precautions

1. Since these screws protects the mechanism during transport, be sure to affix it when it is transported for repair, etc.
2. For pickup unit (CGY1007) handling, please refer to "Disassembly" (Fig. 10). During replacement, handling precautions shall be taken to prevent an electrostatic discharge (protection by a short pin).
3. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.



2. GENERAL GUIDE

RADIO


AUTO MEMORY INDICATOR
FM STEREO INDICATOR
MEMORY CHANNEL INDICATOR
AM/FM1/FM2 INDICATOR
METAL
AUTO.M
ST
APC SCAN
RANDOM RPT
AM
FM 1
FM 2
CH
TRACK
SCAN TUNING
PRESET CHANNELS
FREQUENCY DISPLAY
AUTO MEMORY
DISPLAY
MANUAL TUNE
VOLUME
BALANCE
BASS/TREBLE ILLUMINATION ON-OFF
FADER
DISC SET
VOL -O- BAL
BASS -O- FAD
TRE LIGHT
AUTO M
SCAN
1 RAN
2 RPT
3
4
5
6
FF UP
DOWN REW
DIVERSITY
APC
PRO
POWER/SOURCE
FM
AM
CD
TAPE
mazda
AM
Push for AM mode.
FM
Push for FM mode.
Pushing FM again will alternate between FM1 and FM2.

To tune ON the radio,
push FM or AM button.

Fig. 1

CD, CASSETTE

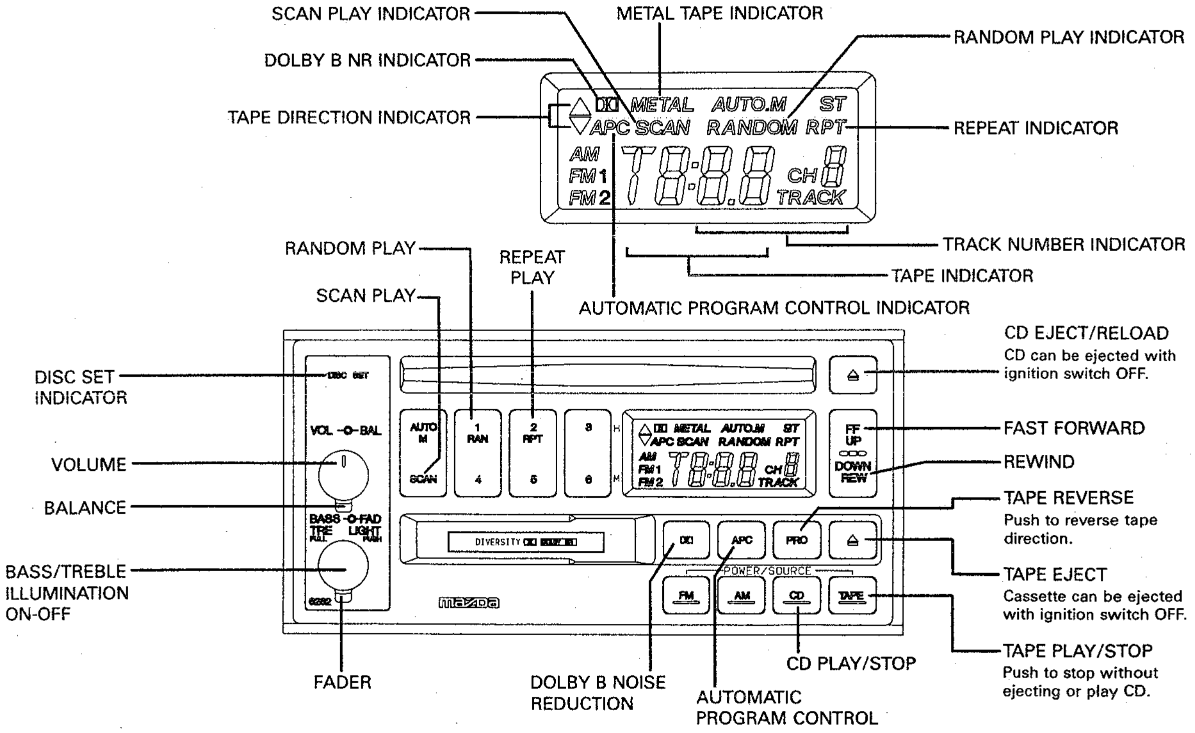
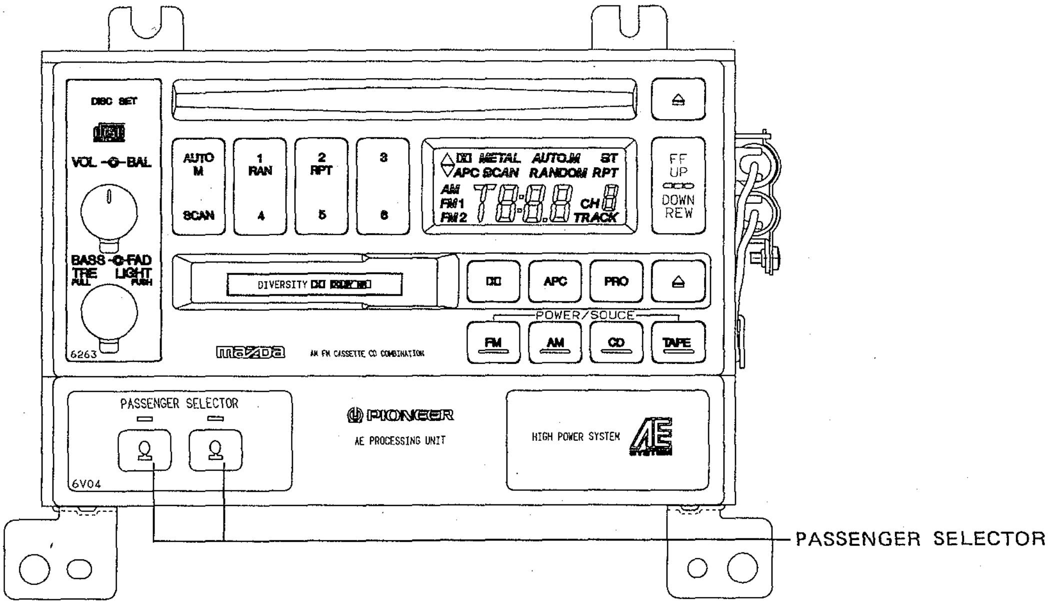

SCAN PLAY INDICATOR
METAL TAPE INDICATOR
RANDOM PLAY INDICATOR
DOLBY B NR INDICATOR
TAPE DIRECTION INDICATOR
REPEAT INDICATOR
TRACK NUMBER INDICATOR
TAPE INDICATOR
AUTOMATIC PROGRAM CONTROL INDICATOR
RANDOM PLAY
REPEAT PLAY
SCAN PLAY
CD EJECT/RELOAD
CD can be ejected with ignition switch OFF.
DISC SET INDICATOR
VOLUME
BALANCE
BASS/TREBLE ILLUMINATION ON-OFF
FADER
FAST FORWARD
REWIND
TAPE REVERSE
Push to reverse tape direction.
TAPE EJECT
Cassette can be ejected with ignition switch OFF.
TAPE PLAY/STOP
Push to stop without ejecting or play CD.
CD PLAY/STOP
DOLBY B NOISE REDUCTION
AUTOMATIC PROGRAM CONTROL
METAL
AUTO.M
ST
APC SCAN
RANDOM RPT
AM
FM 1
FM 2
CH
TRACK
POWER/SOURCE
FM
AM
CD
TAPE
mazda

Fig. 2

DEH-K4041ZM


DISC SET
VOL -○- BAL
BASS -○- FAD
TRE LIGHT
PULL PUSH
6263
AUTO M
SCAN
1 RAN
4
2 RPT
5
3
6
METAL AUTO.M ST
APC SCAN RANDOM RPT
AM
FM1
FM2
CH
TRACK
FF UP
DOWN REW
DIVERSITY
APC
PRO
POWER/SOUCE
FM
AM
CD
TAPE
mazda
AM FM CASSETTE CD COMBINATION
PASSENGER SELECTOR
6V04
PIONEER
AE PROCESSING UNIT
HIGH POWER SYSTEM
AE SYSTEM
PASSENGER SELECTOR

DEH-K4141ZM

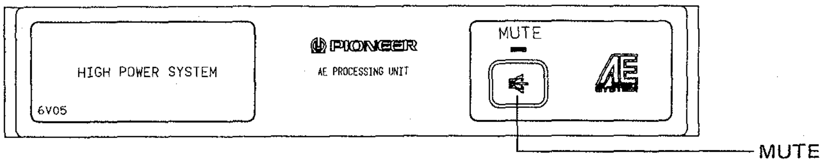
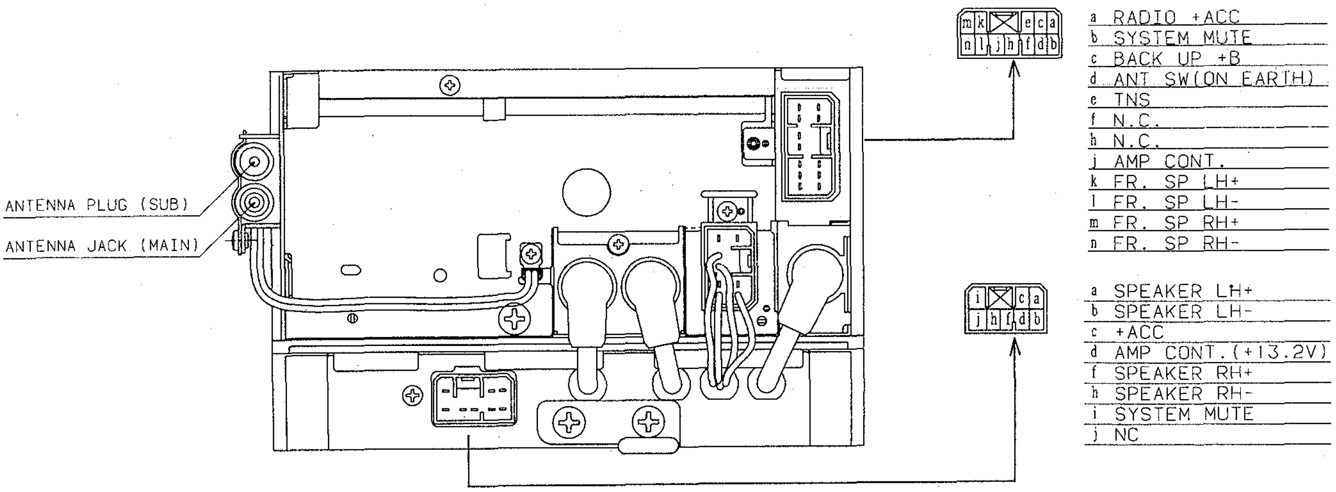

HIGH POWER SYSTEM
6V05
PIONEER
AE PROCESSING UNIT
MUTE
AE SYSTEM
MUTE

Fig. 3

3. CONNECTOR FUNCTION DESCRIPTION


ANTENNA PLUG (SUB)
ANTENNA JACK (MAIN)
m k e c a
n l j h f d b
i c a
j h f d b

a	RADIO +ACC
b	SYSTEM MUTE
c	BACK UP +B
d	ANT SW(ON EARTH)
e	TNS
f	N.C.
h	N.C.
j	AMP CONT.
k	FR. SP LH+
l	FR. SP LH-
m	FR. SP RH+
n	FR. SP RH-

a	SPEAKER LH+
b	SPEAKER LH-
c	+ACC
d	AMP CONT.(+13.2V)
f	SPEAKER RH+
h	SPEAKER RH-
i	SYSTEM MUTE
j	NC

Fig. 4

4. DISASSEMBLY

• Removing the Case

1. Remove the twelve screws, and remove the bracket.
2. Remove the four screws A.
3. Disconnect the stoppers indicated by arrow, and remove the case.

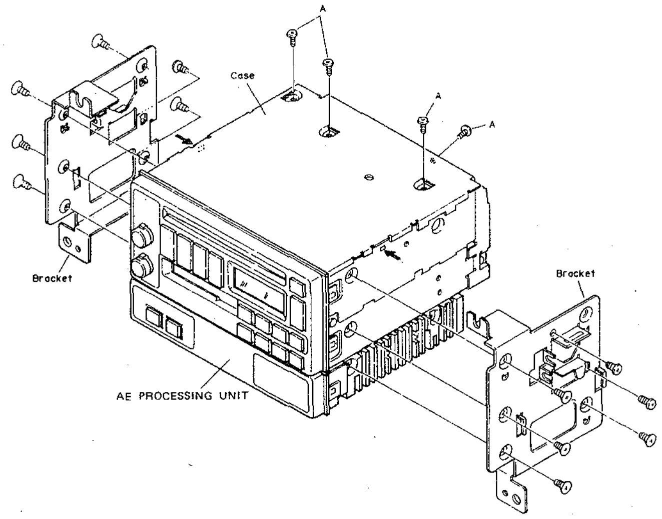

A
Case
A
A
Bracket
Bracket
AE PROCESSING UNIT

Fig. 5

• Removing the Tuner Assy

1. Remove the two screws.
2. Disconnect the two connectors, and remove the tuner assy.

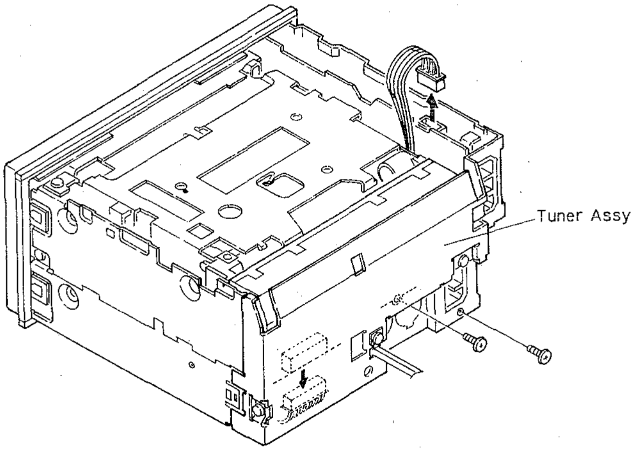


Fig. 6

- **Removing the IF · MPX P.C.Board**

1. Remove the two screws, and remove the case.
2. Remove solders at two locations indicated by arrows, and remove screw.
3. Disconnect the two connectors, and raise the IF · MPX p.c.board to remove from FE · AM p.c.board.

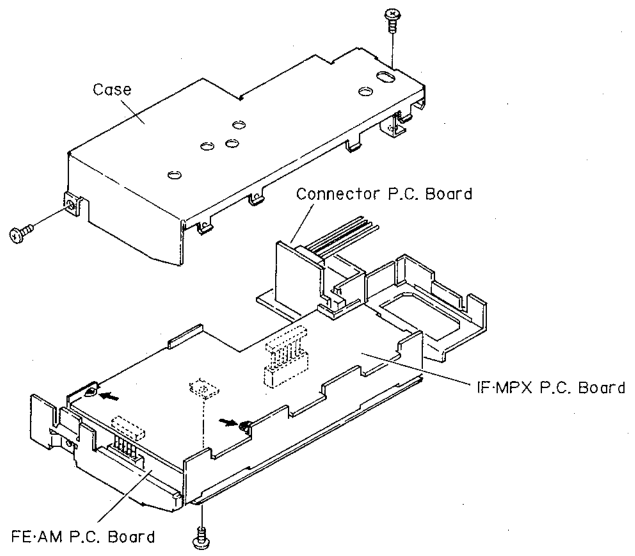

Case
Connector P.C. Board
IF·MPX P.C. Board
FE·AM P.C. Board

Fig. 7

- **Removing the Grille Assy**

1. Remove the four knobs.
2. Disengage the four claws indicated by arrows.
3. Disconnect the two connectors, and remove the grille assy.

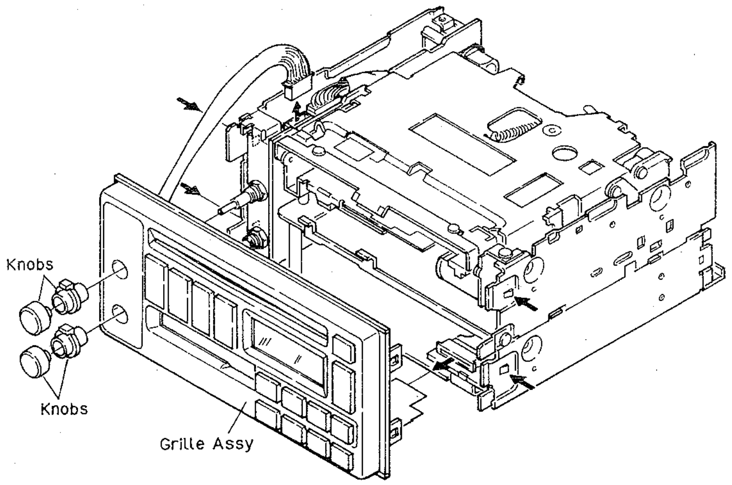

Knobs
Knobs
Grille Assy

Fig. 8

- **Removing the CD Assy**

1. Remove the three screws.
2. Disconnect the two connectors, and remove the CD assy.

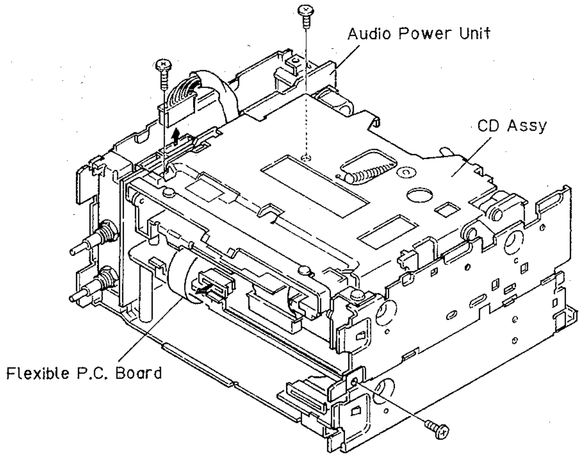

Audio Power Unit
CD Assy
Flexible P.C. Board

Fig. 9

- **Removing the CD Mechanism Unit**

1. Remove the three screws.
2. Disconnect the two connectors, and remove the CD mechanism unit.

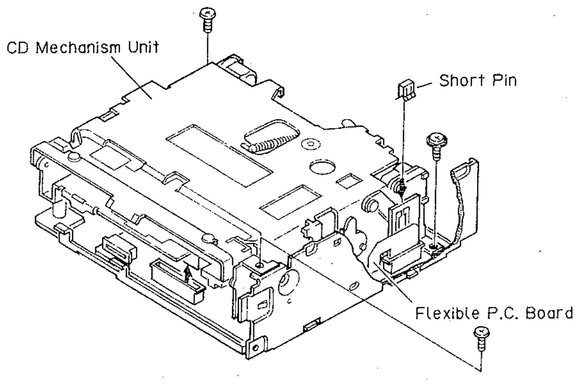

CD Mechanism Unit
Short Pin
Flexible P.C. Board

Fig. 10

NOTE: When remove the flexible p.c.board, always insert a shorting pin or insert an inter-pattern short (jumper) before disconnecting the board from the connector.

- **Removing the Cassette Mechanism Assy**

1. Remove the two screws, and remove the cover.
2. Disconnect the two connectors.
3. Remove the four screws, and remove the cassette mechanism assy.

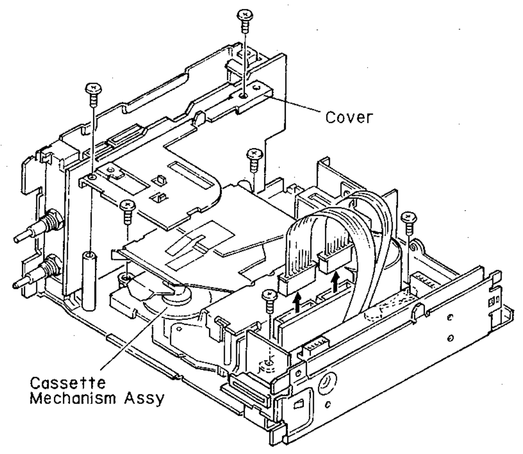

Cover
Cassette
Mechanism Assy

Fig. 11

- **Removing the Audio Power Unit** (Fig. 12)

1. Remove the three screws.
2. Disconnect the connector, and raise the audio power unit to remove from control p.c.board.

- **Removing the P.C.Board** (Fig. 12)

1. Disconnect the connector, and raise the p.c.board to remove from control p.c.board.

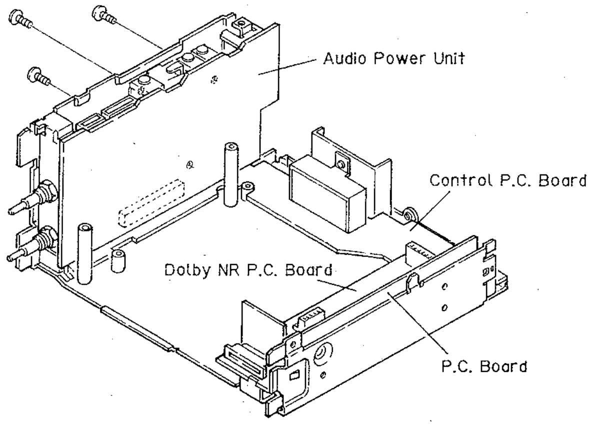

Audio Power Unit
Control P.C. Board
Dolby NR P.C. Board
P.C. Board

Fig. 12

- **Removing the Dolby NR P.C.Board** (Fig. 12)

1. Disconnect the connector, and raise the dolby NR p.c.board to remove from control p.c.board.

5. BLOCK DIAGRAM

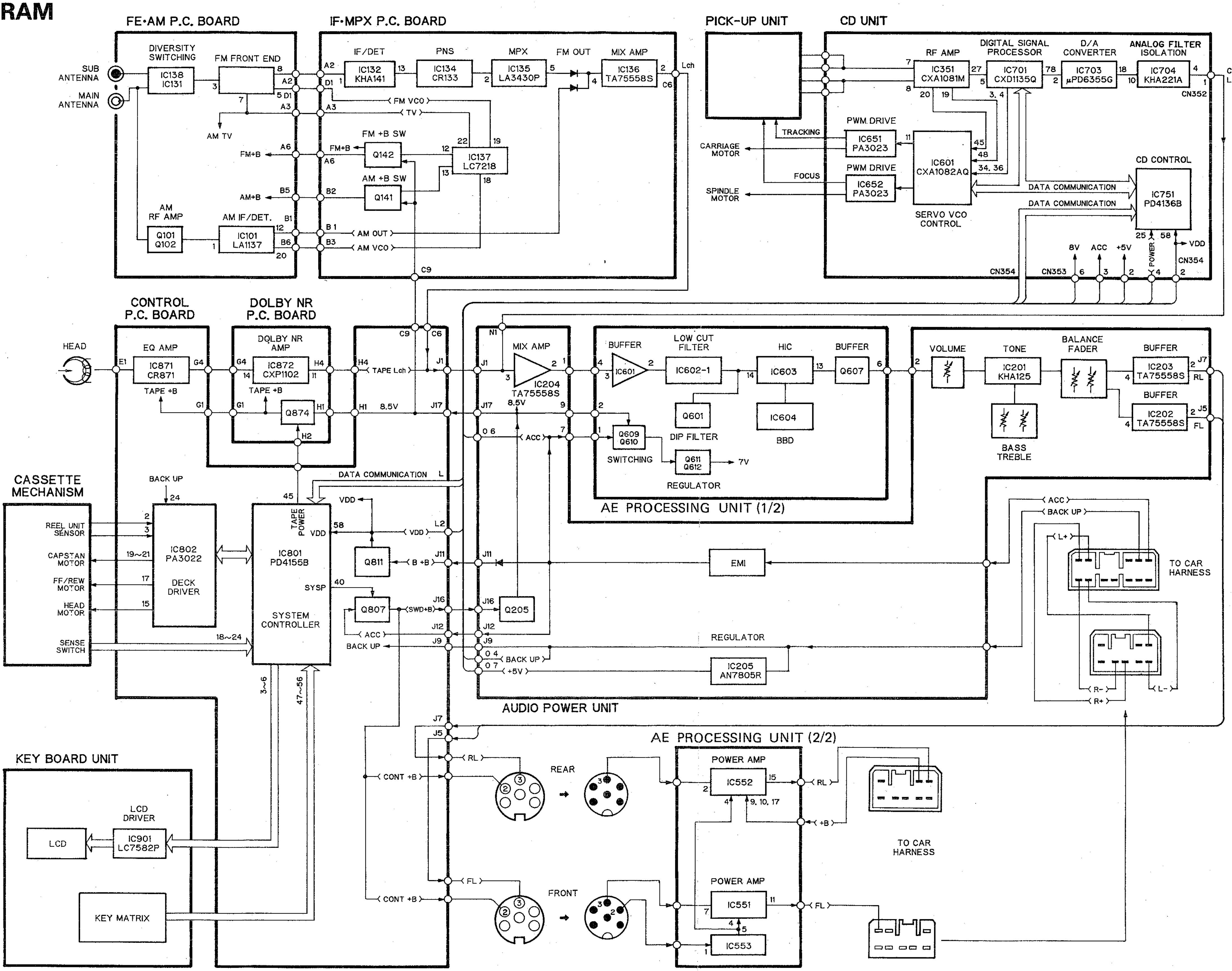

FE•AM P.C. BOARD
IF•MPX P.C. BOARD
PICK-UP UNIT
CD UNIT
SUB ANTENNA
MAIN ANTENNA
DIVERSITY SWITCHING
IC138
IC131
FM FRONT END
AM TV
FM+B
AM+B
AM RF AMP
Q101
Q102
AM IF/DET.
IC101
LA1137
IF/DET
IC132
KHA141
PNS
IC134
CR133
MPX
IC135
LA3430P
FM OUT
MIX AMP
IC136
TA75558S
Lch
FM VCO
TV
FM +B SW
Q142
AM +B SW
Q141
IC137
LC7218
AM OUT
AM VCO
RF AMP
IC351
CXA1081M
DIGITAL SIGNAL PROCESSOR
IC701
CXD1135Q
D/A CONVERTER
IC703
μPD6355G
ANALOG FILTER ISOLATION
IC704
KHA221A
CD Lch
CN352
TRACKING
FOCUS
CARRIAGE MOTOR
SPINDLE MOTOR
PWM DRIVE
IC651
PA3023
IC652
PA3023
IC601
CXA1082AQ
SERVO VCO CONTROL
CD CONTROL
IC751
PD4136B
DATA COMMUNICATION
VDD
8V
ACC
+5V
POWER
CN354
CN353
CONTROL P.C. BOARD
DOLBY NR P.C. BOARD
HEAD
EQ AMP
IC871
CR871
TAPE +B
DOLBY NR AMP
IC872
CXP1102
Q874
TAPE Lch
8.5V
MIX AMP
IC204
TA75558S
BUFFER
IC601
LOW CUT FILTER
IC602-1
HIC
IC603
BUFFER
Q607
Q601
DIP FILTER
IC604
BBD
Q609
Q610
SWITCHING
Q611
Q612
7V
REGULATOR
AE PROCESSING UNIT (1/2)
VOLUME
TONE
IC201
KHA125
BASS
TREBLE
BALANCE FADER
BUFFER
IC203
TA75558S
IC202
TA75558S
RL
FL
CASSETTE MECHANISM
REEL UNIT SENSOR
CAPSTAN MOTOR
FF/REW MOTOR
HEAD MOTOR
SENSE SWITCH
BACK UP
IC802
PA3022
DECK DRIVER
TAPE POWER
IC801
PD4155B
SYSP
SYSTEM CONTROLLER
VDD
Q811
B +B
Q807
SWD+B
ACC
DATA COMMUNICATION
Q205
EMI
REGULATOR
IC205
AN7805R
+5V
AUDIO POWER UNIT
TO CAR HARNESS
L+
L-
R-
R+
KEY BOARD UNIT
LCD
LCD DRIVER
IC901
LC7582P
KEY MATRIX
CONT +B
REAR
FRONT
AE PROCESSING UNIT (2/2)
POWER AMP
IC552
IC551
IC553
TO CAR HARNESS

Fig. 13

6. ADJUSTMENT

- Connection Diagram

NOTICE:
Select C1 so that total capacity of 80pF attained from the direction of the receiver jack.
Z: Output impedance of SSG.

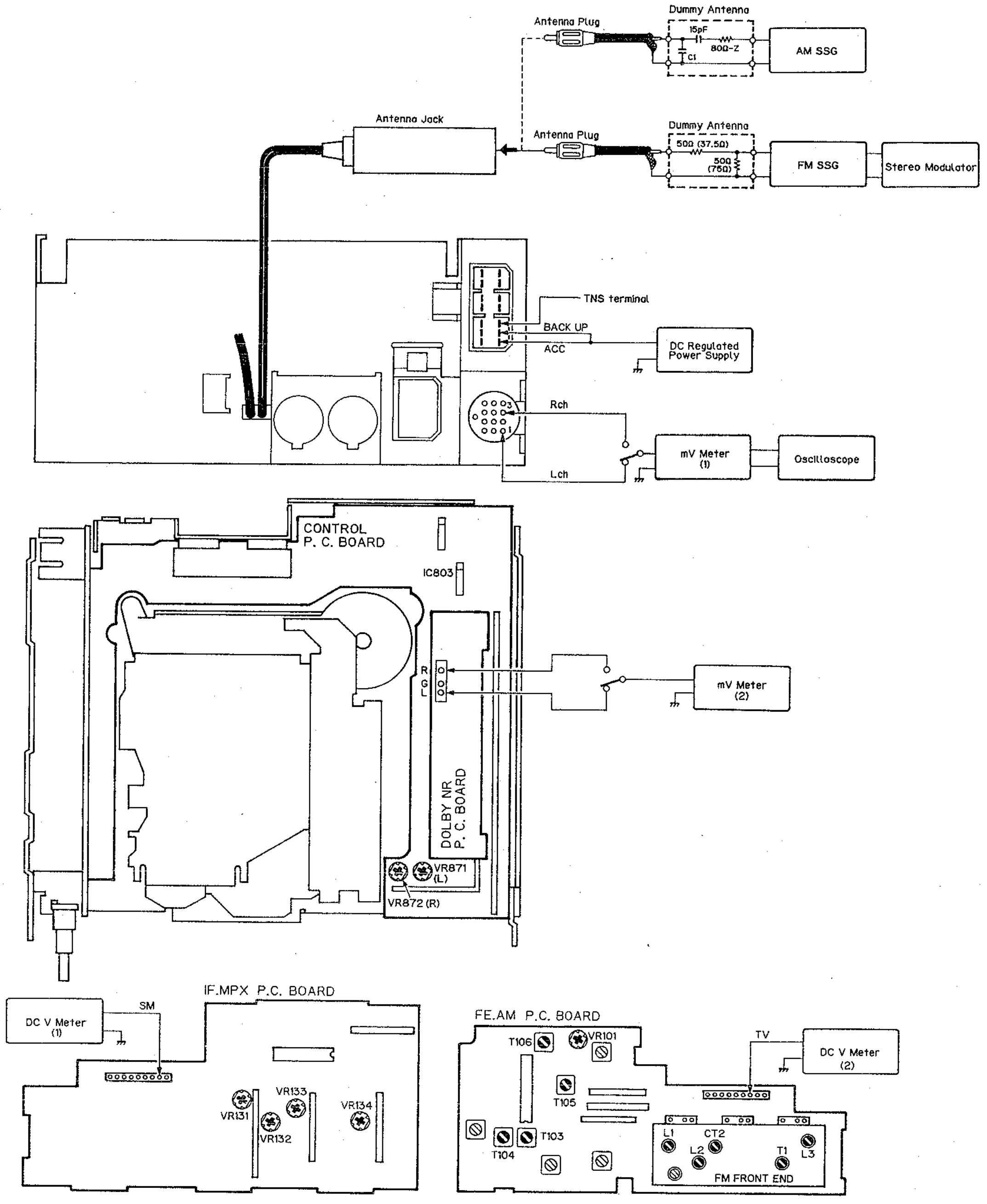

Dummy Antenna
Antenna Plug
15pF
80Ω-Z
C1
AM SSG
Antenna Jack
Dummy Antenna
Antenna Plug
50Ω (37.5Ω)
50Ω (75Ω)
FM SSG
Stereo Modulator
TNS terminal
BACK UP
ACC
DC Regulated Power Supply
Rch
Lch
mV Meter (1)
Oscilloscope
CONTROL P. C. BOARD
IC803
R
G
L
mV Meter (2)
DOLBY NR P. C. BOARD
VR871 (L)
VR872 (R)
IF.MPX P.C. BOARD
DC V Meter (1)
SM
VR131
VR132
VR133
VR134
FE.AM P.C. BOARD
T106
VR101
T105
T103
T104
TV
DC V Meter (2)
L1
CT2
L2
T1
L3
FM FRONT END

Fig. 14

DOLBY NR LEVEL ADJUSTMENT

No.	Cassette Tape	Adjusting Point	Adjustment Method (Switch Position)
1	NCT-150(400Hz,200nwb/m)	VR871(Lch),VR872(Rch)	mV Meter(2):-10 ±1dB (DOLBY NR Switch:OFF)

AM ADJUSTMENT

	No.	AM SSG(400Hz,30%)		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency(kHz)	Level dB(μV)			
IF	1	600	25	600	T103,104 105,106	mV Meter(1):Maximum
Tuning Volt	1			1,710	——	DC V meter(2):Less than 7.5V
	2			530	——	DC V meter(2):More than 0.8V
Stop sensitivity	1	1,000	38	1,000	VR101	Scanning stop
	2	1,000	38±10	1,000	——	Verify that the scanning stop
	3	(LOC Mode)				TNS terminal→13.2V
	4	1,000	63±10	1,000	——	Verify that the scanning stop

FM ADJUSTMENT

※ Stereo MOD.: 1kHz,L+R = 30%

	No.	FM SSG(400Hz, 30%)		Displayed Frequency (MHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level dB(μV)			
IF	1	98.1	10	98.1	T1	mV Meter(1):Maximum
	2	98.1	60	98.1	VR131	DC V Meter(1):2.5V
Tracking	1			107.9	L3	DC V Meter(2):7.0 ±0.1V
	2			87.9	——	DC V Meter(2):More than 1.4V
	3	89.9	10	89.9	L1,L2	mV Meter(1):Maximum
	4	106.1	10	106.1	CT2	mV Meter(1):Maximum
	5	Repeat items (3) and (4) alternately so that the mV meter(1) indicates maximum output				
MPX	1	98.1※	60	98.1	VR133	mV Meter(1):Best separation
	2	98.1※	35	98.1	VR134	mV Meter(1):Separation 5dB
Stop sensitivity	1	98.1	32	98.1	VR132	Scanning stop
	2	98.1	32±8	98.1	——	Verify that the scanning stop

CD ADJUSTMENT

1) Precautions

- CD section uses a single power supply (+5V) of the regulator. The signal reference potencial, therefore, is connected to pin no. 14(approx. 2.5V) of IC351 (CXA-1081M) instead of GND (VC at test point)

If VC and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.

Do not connect the negative probe of the measuring equipment to VC and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to VC with the channel 2 negative probe connected to GND.

And since the frame of the measuring instruments is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.

If by accident VC comes in contact with GND, immediately switch the regulator or power OFF.

- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.
- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.
- Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and/or electrical shocks to the system when making adjustments.
- Test mode starting procedure
  Turn ACC and Back-up ON while pressing the 1/RAN and 3 keys together.
- Test mode cancelation
  Turn ACC and Back-up OFF and then back ON.
- Disc detection during loading and eject operations is performed by means of a photo transistor in this unit. Consequently, if the inside of the unit is exposed to a strong light source when the outer casing is removed for repairs or adjustment, the following malfunctions may occur.
  - ○ During PLAY, even if the eject button is pressed, the disc will not be ejected and the unit will remain in the PLAY mode.
  - ○ The unit will not load a disc.

When the unit malfunctions this way, either re-position the light source, move the unit or cover the photo transistor.

2) Adjustment Point

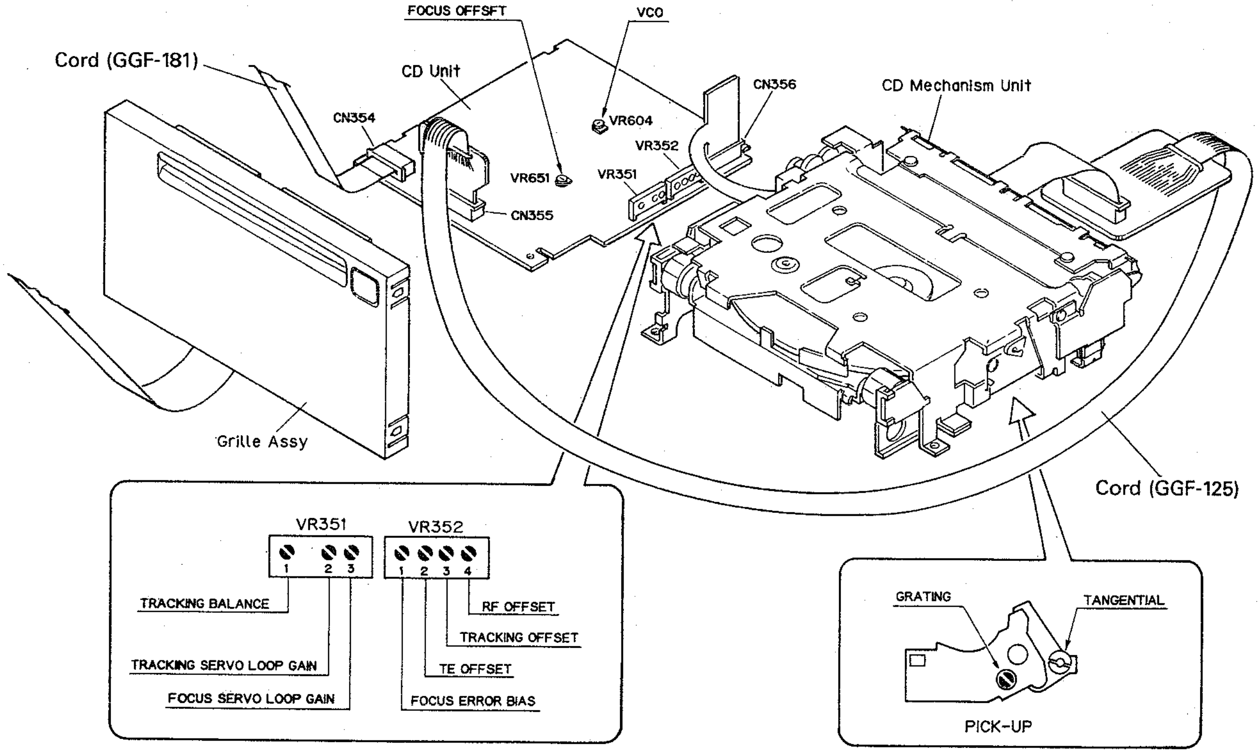

FOCUS OFFSFT
VCO
Cord (GGF-181)
CD Unit
CN354
VR604
VR352
VR651
VR351
CN355
CN356
CD Mechanism Unit
Grille Assy
Cord (GGF-125)
VR351
VR352
1
2
3
1
2
3
4
TRACKING BALANCE
TRACKING SERVO LOOP GAIN
FOCUS SERVO LOOP GAIN
RF OFFSET
TRACKING OFFSET
TE OFFSET
FOCUS ERROR BIAS
GRATING
TANGENTIAL
PICK-UP

Fig. 15

- **Flow Chart**

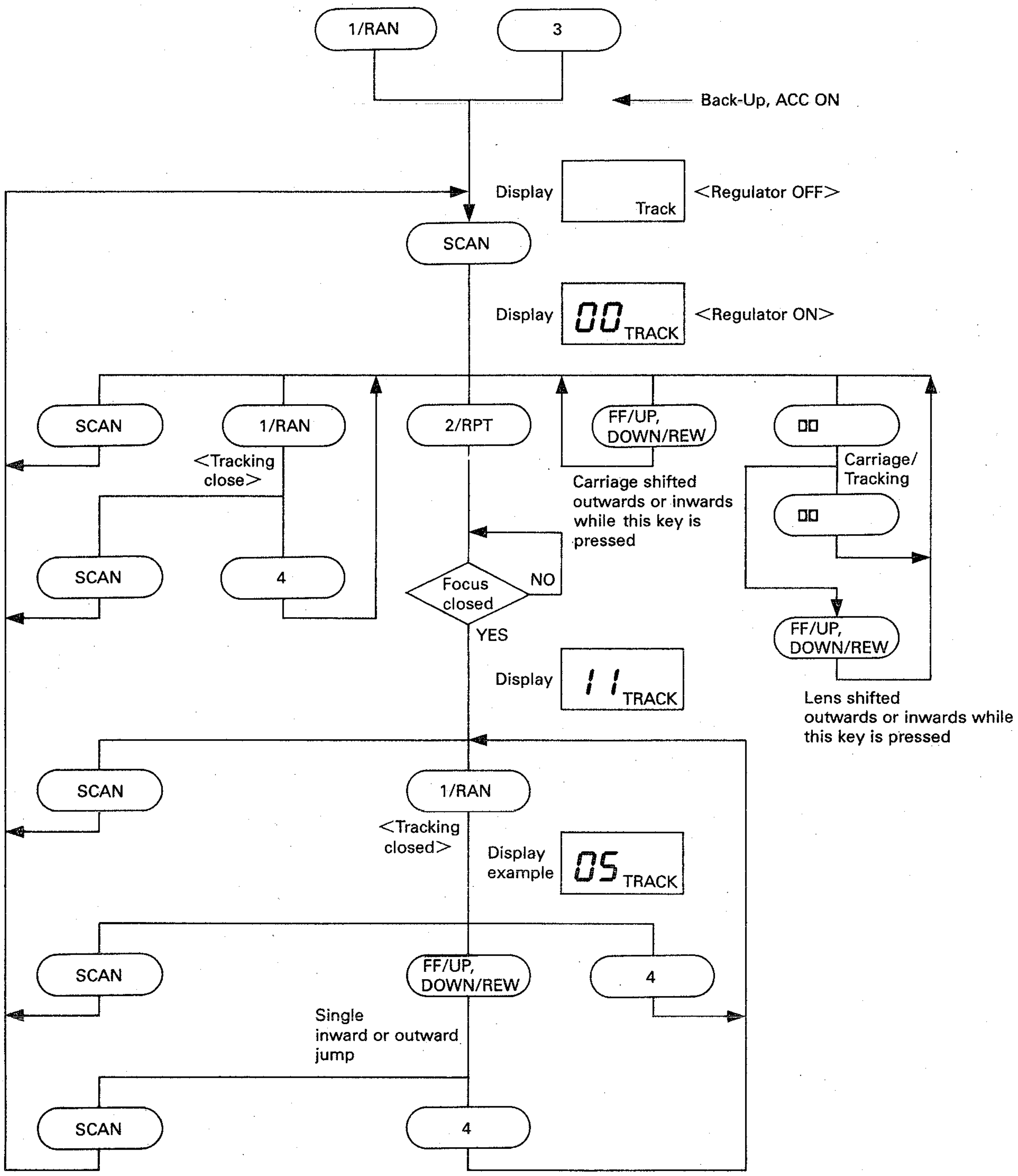

1/RAN
3
Back-Up, ACC ON
Display
Track
<Regulator OFF>
SCAN
Display
00 TRACK
<Regulator ON>
SCAN
1/RAN
<Tracking close>
2/RPT
FF/UP, DOWN/REW
□□
Carriage/ Tracking
□□
Carriage shifted outwards or inwards while this key is pressed
SCAN
4
Focus closed
NO
YES
FF/UP, DOWN/REW
Display
11 TRACK
Lens shifted outwards or inwards while this key is pressed
SCAN
1/RAN
<Tracking closed>
Display example
05 TRACK
SCAN
FF/UP, DOWN/REW
4
Single inward or outward jump
SCAN
4

Fig. 16

- **Test point**

CD UNIT

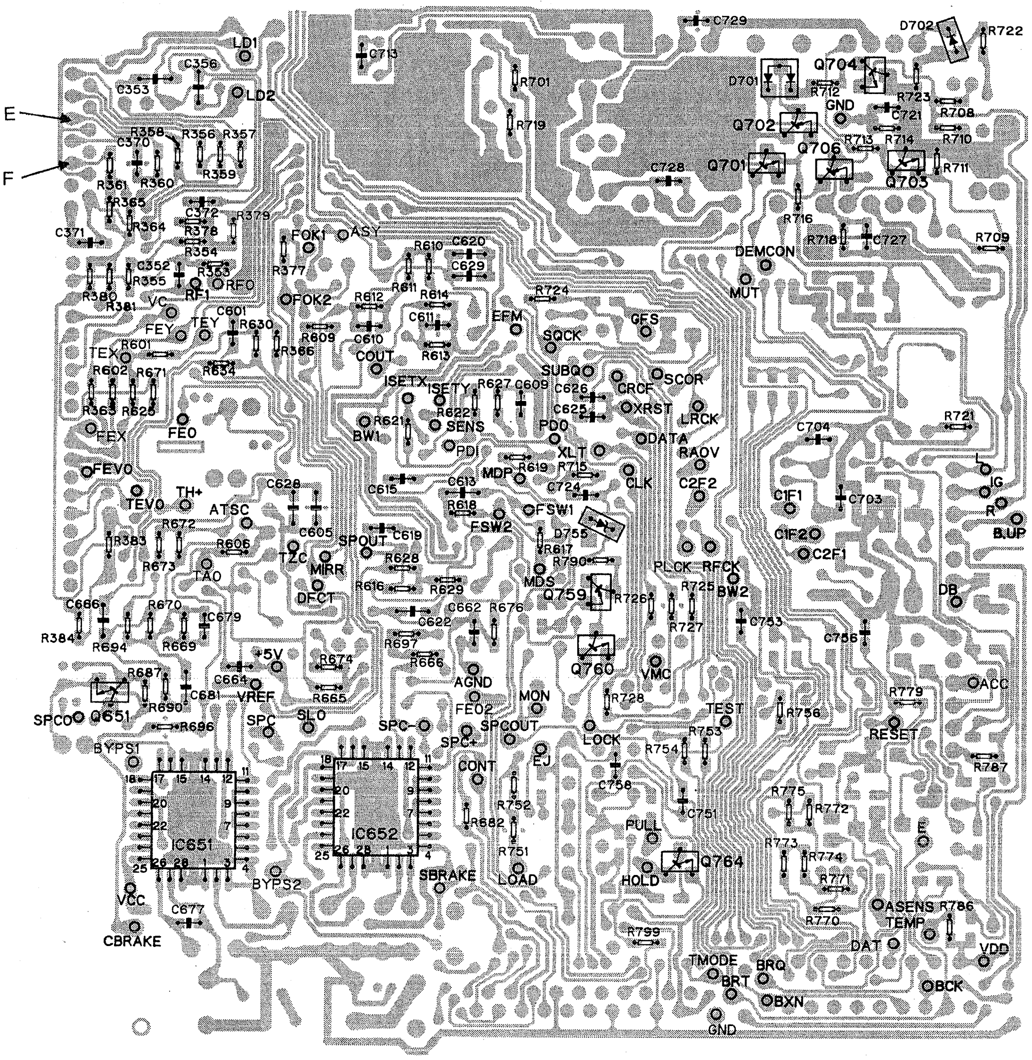

E
F
LD1
LD2
IC651
IC652
Q651
Q759
Q760
Q764
Q701
Q702
Q703
Q704
Q706
D701
D702
GND
VCC
VDD
+5V
RESET
TEST
BCK
DAT
BRQ
BXN
TMODE
BRT
ACC
B.UP
IG
DB

Fig. 17

6.1 Focus Offset Adjustment

- Purpose: To adjust the electrical offset of the focus amplifier to zero.
- Maladjustment symptoms: No focus closing

● Measuring equipment/ jigs	• Multi-meter or oscilloscope
● Measuring point	• FEO2
● Test disc and setting	• No disc, test mode
● Adjustment position	• VR651

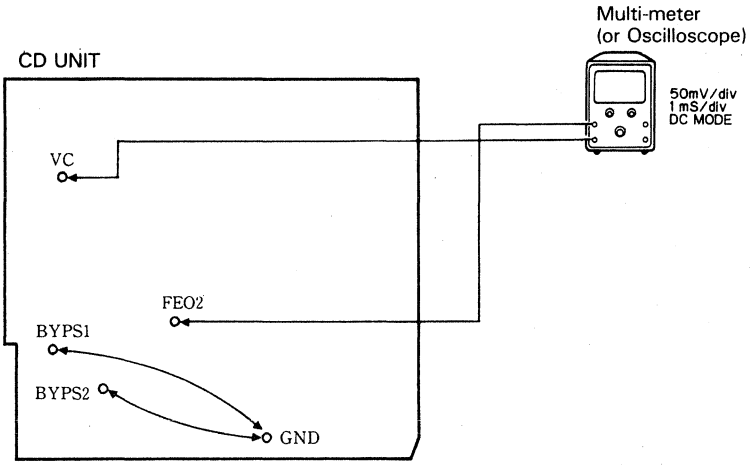

Multi-meter
(or Oscilloscope)
50mV/div
1 mS/div
DC MODE
CD UNIT
VC
FEO2
BYPS1
BYPS2
GND

Fig. 18

Adjustment Procedure

1. Connect BYPS 1 and BYPS 2 to GND.
2. Switch regulator ON.
3. Using VR651, adjust the FEO2 DC voltage in reference to VC to a value of 0 ± 25mV.

6.2 VCO Free Run Frequency Adjustment

- Purpose: To adjust the EFM decoder reference clock free- run frequency to a suitable value
- Maladjustment symptoms: Spindle lock not possible, distorted sound or no sound at all

● Measuring equipment/ jigs	• Frequency counter, extension cables
● Measuring point	• Pin no.70 (PLCK) of IC701 (CXD1135Q)
● Test disc and setting	• No disc • Test mode
● Adjustment position	• VR604

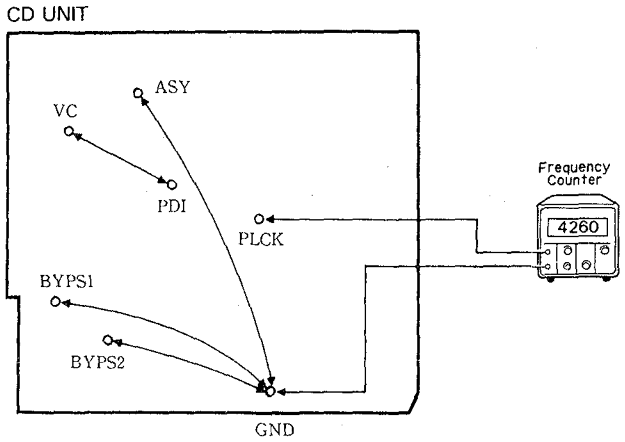


Fig. 19

Adjustment Procedure

1. Connect pin no.26 (TP ASY) of IC351 to GND.
   Connect BYPS 1 and BYPS 2 to GND.
2. Connect pin no.1 (TP VC) of IC601 to pin no.28 (TP PDI).
3. Switch regulator ON while in test mode.
4. Connect the frequency counter to pin no.70 (TP PLCK) of IC701 (CXD1135Q).
5. Adjust VR604 to obtain a frequency of 4.26 ±0.005MHz.
6. Switch regulator OFF.
7. Disconnect the leads connecting TP VC to TP PDI, and TP ASY to GND.

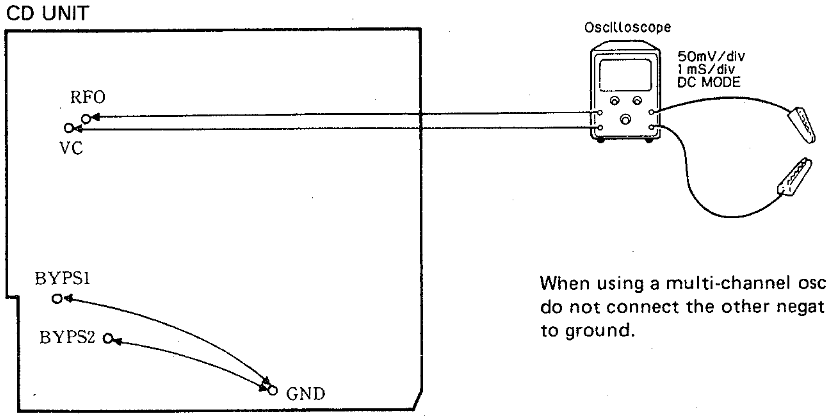
Note: Connect TP VC and TP PDI with leads kept as short as possible.

Note: Connect the frequency counter ground to TP GND as shown in the figure.

6.3 RF Offset Adjustment

- Purpose: To adjust the RF amplifier offset to a suitable value
- Maladjustment symptoms: Focus closure fails readily

Measuring equipment/ jigs	Oscilloscope	
Measuring point	RFO	
Test disc and setting	No disc	Test mode
Adjustment position	VR352-4 (RFO)	


CD UNIT
RFO
VC
BYPS1
BYPS2
GND
Oscilloscope
50mV/div
1 mS/div
DC MODE

When using a multi-channel oscilloscope, do not connect the other negative probe to ground.

Fig. 20

Adjustment Procedure

1. Connect BYPS 1 and BYPS 2 to GND.
2. Switch regulator ON.
3. Using the oscilloscope, measure the RFO DC voltage in reference to VC, and adjust VR352-4 (RFO) to obtain a reading of +250 ± 25mV.

6.4 Tracking Offset Adjustment

- Purpose: To adjust the electrical offset of the tracking amplifier to zero
- Maladjustment symptoms: Search times too long, carriage run-away

● Measuring equipment/ jigs	• Oscilloscope
● Measuring point	• TAO low-pass filter output
● Test disc and setting	• No disc • Test mode
● Adjustment position	• VR352-3 (TO)

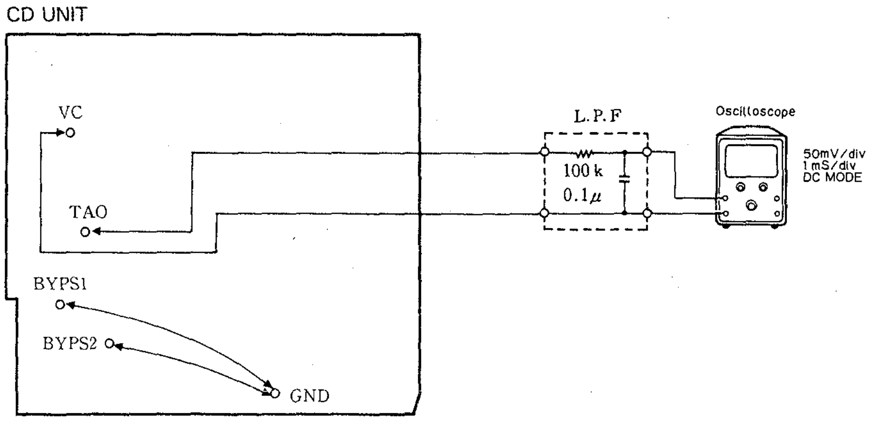

CD UNIT
VC
TAO
BYPS1
BYPS2
GND
L.P.F
100 k
0.1μ
Oscilloscope
50mV/div
1 mS/div
DC MODE

Fig. 21

Adjustment Procedure

1. Insert a low-pass filter between TAO and VC.
2. Check that BYPS 1 and BYPS 2 are connected to GND. GND.
3. Switch regulator ON.
4. Using the oscilloscope, measure the TAO LPF output DC voltage in reference to VC, and adjust VR352-3 (TO) to obtain a reading of 0 ± 25mV.
   The low-pass filter may be left in place for later adjustments.

6.5 TE Offset Adjustment - I

- Purpose: To adjust the electrical offset of the tracking servo to zero.
- Maladjustment symptoms: Search times too long, carriage run-away

Measuring equipment/ jigs	• DC voltmeter
Measuring point	• TAO low-pass filter output
Test disc and setting	• No disc • Test mode
Adjustment position	• VR352-2 (TEO)

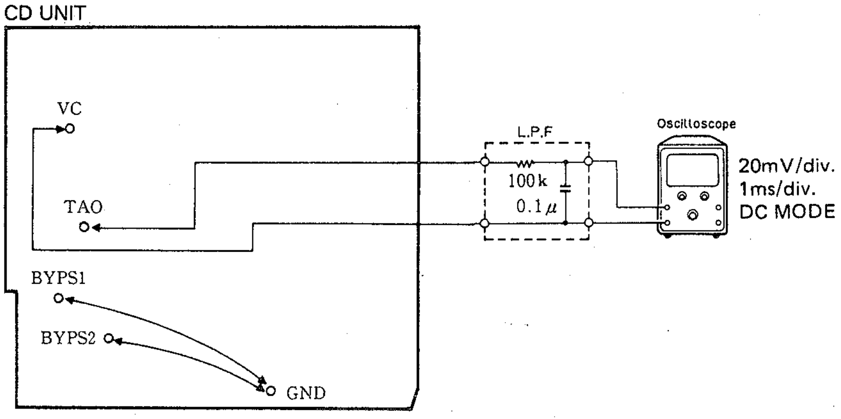

CD UNIT
VC
TAO
BYPS1
BYPS2
GND
L.P.F
100k
0.1μ
Oscilloscope
20mV/div.
1ms/div.
DC MODE

Fig. 22

Adjustment Procedure

1. Check that BYPS 1 and BYPS 2 are connected to GND.
2. Switch regulator ON while in test mode.
3. Press the 1/RAN key to close tracking.
4. Using VR352-2 (TEO), adjust the TAO LPF output DC voltage in reference to VC to a value of 0 ± 10mV.
5. Switch regulator OFF.

6.6 Tracking Balance Adjustment - I

- Purpose: To adjust the tracking servo offset to zero.
- Maladjustment symptoms: Search times too long, poor playability, carriage run-away

● Measuring equipment/ jigs	• Oscilloscope
● Measuring point	• TEY (Tracking error signal), low-pass filter output
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Test mode
● Adjustment position	• VR351-1 (T. BAL)

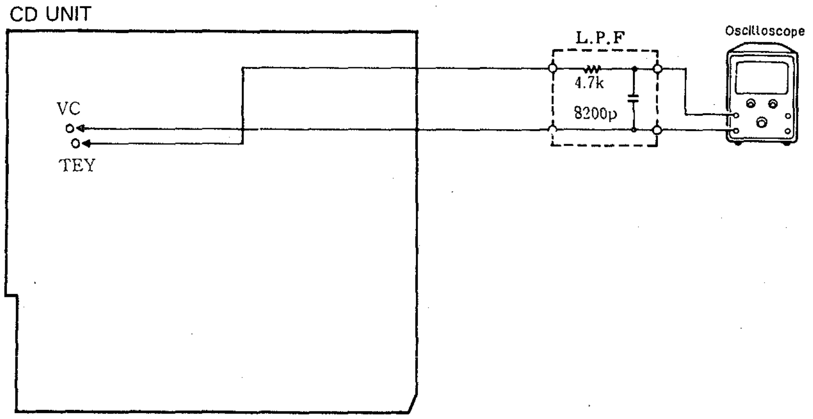


Fig. 23

Adjustment Procedure

1. After checking that regulator is OFF, connect the low-pass filter as shown in the diagram.
2. Disconnect BYPS 1 and BYPS 2 from ground.
3. Set the test disc (SONY TYPE 4) in magazine tray 6 and load the magazine. Switch regulator ON.
4. Using the FF/UP or DOWN/REW key, move the pick-up to about the center of the signal surface.
5. Press the 2/RPT key to close focus.
6. Using an oscilloscope, observe the TEY signal in respect to VC. Then adjust VR351-1 (T. BAL) to set the positive and negative amplitudes to the same levels. (See Fig. 24–26)
7. Switch the power OFF.
   The low-pass filter may be left in place for later adjustments.

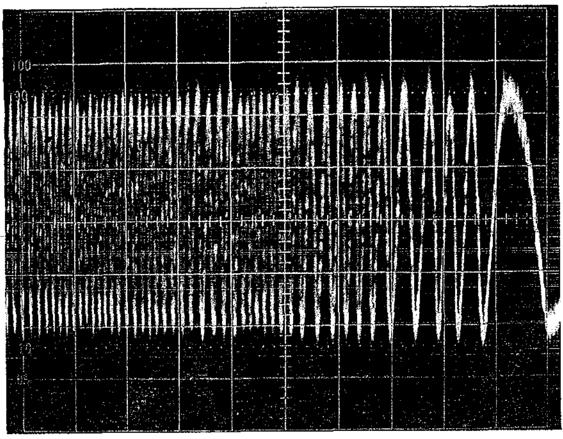

+5% NG

Fig. 24

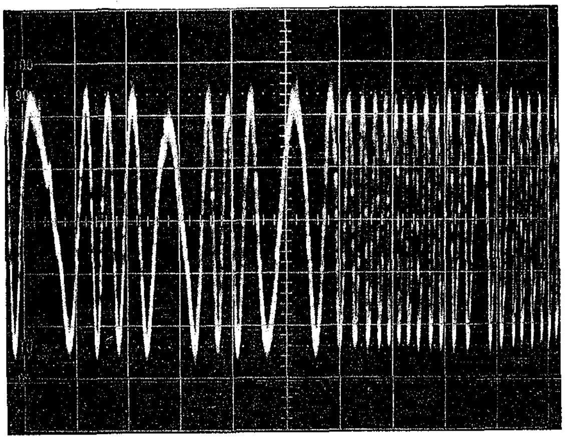
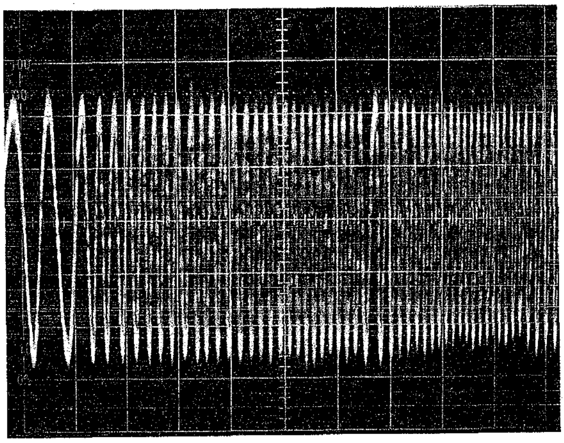

±0% OK

Fig. 25


−5% NG

10ms/div.
0.2V/div.
DC Mode

Fig. 26

6.7 Tangential Skew Check

- Purpose: To check whether tangential skew has been misaligned or not when replacing the pick-ip unit.
- Maladjustment symptoms: No disc playback; track jumping

● Measuring equipment/ jigs	• Oscilloscope, extension connectors, screwdriver
● Measuring point	• RFO
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Normal mode
● Adjustment position	• Pick-up tangential adjustment screw

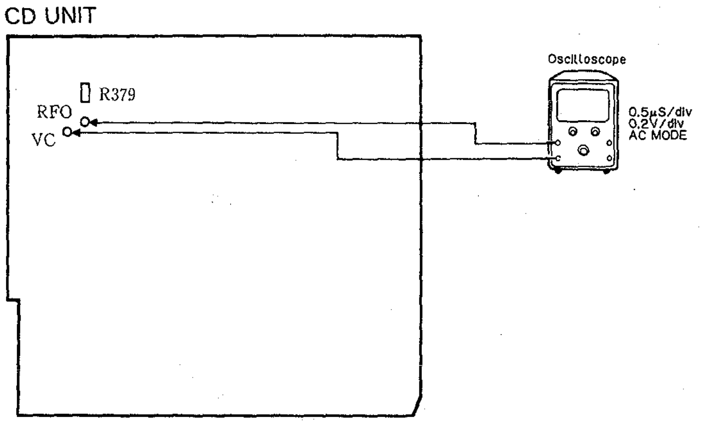
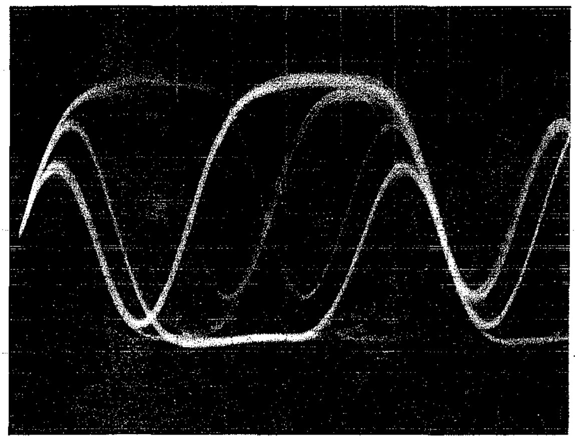


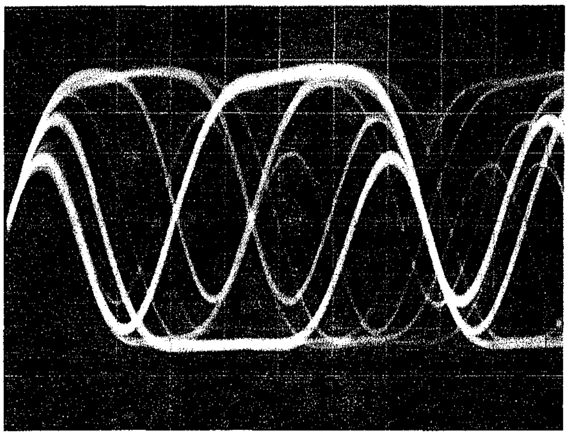
Fig. 27

Adjustment Procedure (with R379 removed)

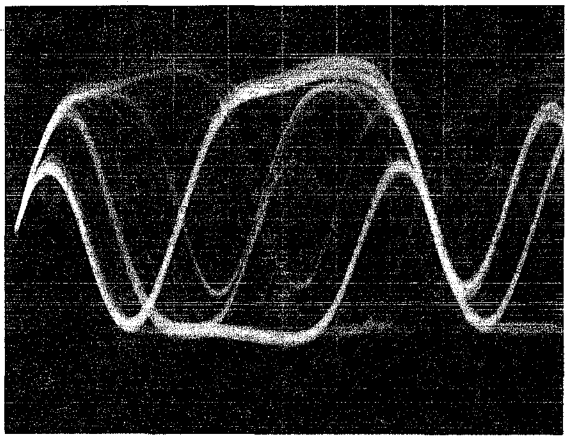
1. Remove R379 (but reconnect after completing adjustment).
2. Play tune TNO 7 in normal mode. (TYPE 3: TNO 23)
3. Check that the valley at the 11T section of the RF waveform is flat.
4. If out of adjustment, readjust to obtain a flat RF waveform. (See Fig. 28—33) Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.)
5. Switch the power OFF and reconnect R379.
6. Apply "screw-lock" to the tangential adjustment screw.
7. After adjusting tangential skew, also adjust the grating.
8. If tangential skew is seriously out of adjustment, carriage stopping and run-away tend to occur in normal mode. In this case,
   a) Switch to test mode,
   b) Shift the pick-up to signal surface center using FF/UP or DOWN/REW key.
   c) Press the 2/RPT key to close focus.
   d) Press the 1/RAN key to close the tracking.
   e) Observe RFO in respect to VC, and turn the tangential adjustment screw to obtain a flat waveform at the 11T section.
   f) Repeat the adjustment resuming from step 2.



NG Fig. 28

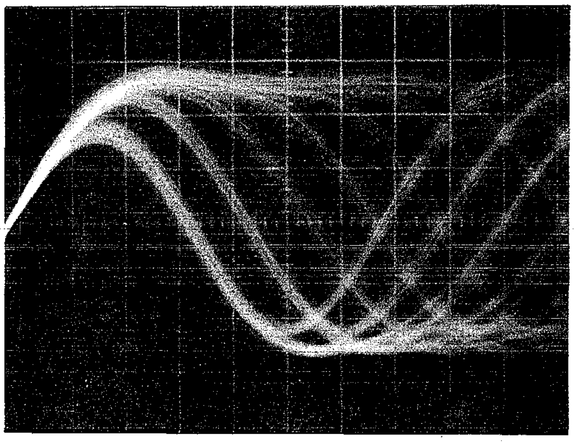


OK Fig. 30

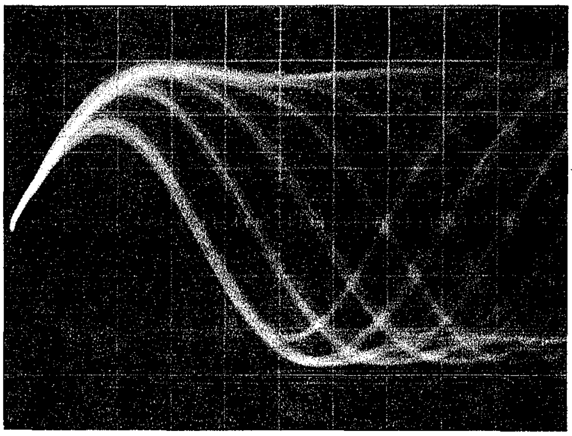


NG Fig. 32

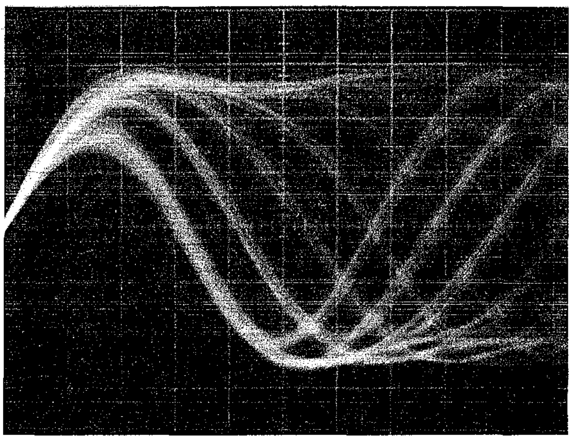
Play tune TNO 7 (TYPE4)



NG Fig. 29



OK Fig. 31

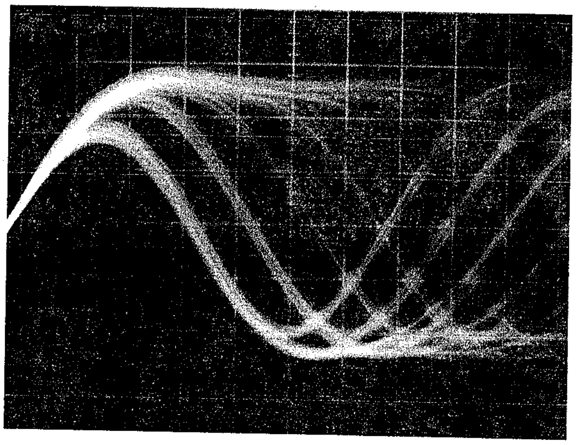


NG Fig. 33

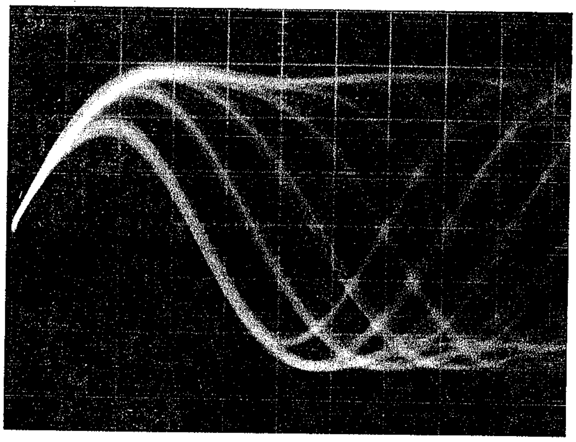
Play tune TNO 12 (TYPE4)

Adjustment Procedure (without R379 removed)

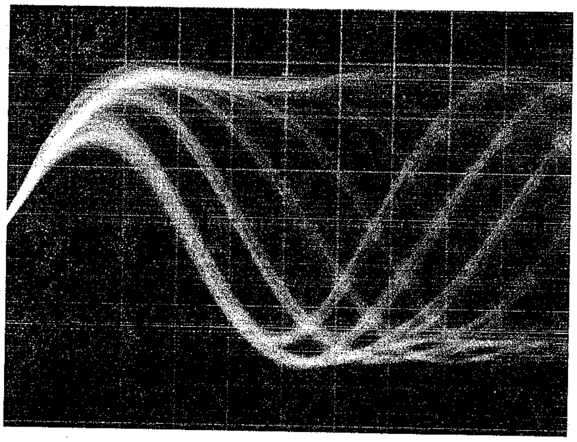
1. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
2. Turn the tangential adjustment screw to obtain a good RF waveform eye pattern. Turn the adjustment screw both clockwise and counterclockwise to points where the eye pattern deteriorates, and take the midway point as the adjustment point. As a general guide, look for an overall clear waveform, and one of the diamond shapes in the eye pattern. The diamond shapes should appear in fine lines at the point of optimum adjustment. Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.) (See Fig. 34—36)
3. Apply "screw-lock" to the tangential adjustment screw.
4. After adjusting tangential skew, also adjust the grating.



NG Fig. 34



OK Fig. 35



NG Fig. 36

6.8 Grating Adjustment

- Purpose: The grating may need adjustment in a replaced pick-up assembly.
- Maladjustment symptoms: No disc playback; track jumping

● Measuring equipment/ jigs	• Oscilloscope, clock driver, grating adjustment filter (bandpass filter), AC millivoltmeter, two low-pass filters
● Measuring point	• TEY, E LPF output, F LPF output
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Test mode
● Adjustment position	• Pick-up grating adjustment hole

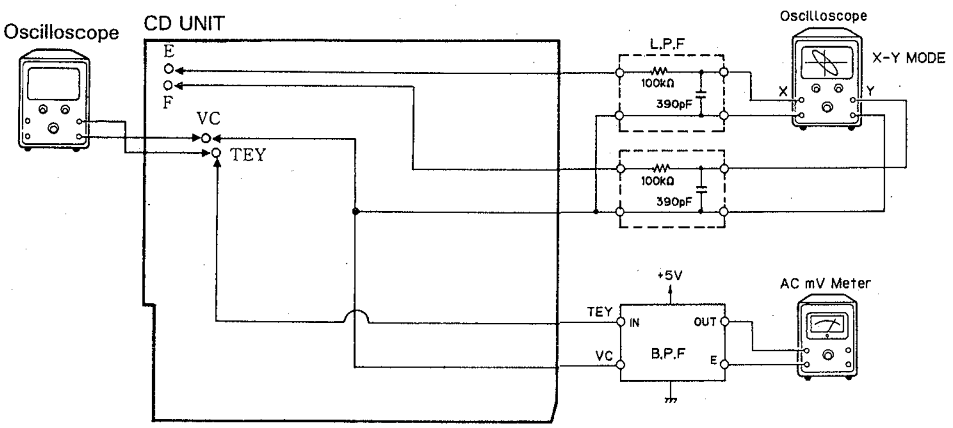


Fig. 37

Adjustment Procedure

1. Connect a low-pass filter (100k, 390p) to test points E, F, and VC as shown in the above diagram.
2. Switch regulator ON in test mode, and load a disc.
3. Press the 2/RPT key to close focus.
4. Press the 1/RAN key to close tracking.
5. Press the FF/UP or DOWN/REW key, move the pick-up to about the center of the signal surface (tune TNO 6). (TYPE 3: TNO 7)
6. Press the SCAN key to open tracking.
7. While monitoring the TEY filter output by AC milli-voltmeter, turn the grating adjustment hole slowly. The AC voltage increases and decreases while turning the screw. Search for the minimum voltage level. (This corresponds to the position where the grating is on a track, and is referred to as the null point.)
8. Then while monitoring TEY by oscilloscope, turn the driver slowly clockwise from the null point (as seen from under the lens) until the first waveform peak amplitude is reached. (See Fig. 39–44)

9. With the E low-pass filter output connected to the X axis of the oscilloscope, and the F low-pass filter output connected to the Y axis, apply an input in AC mode and observe the Lissajous figure.
10. Using the driver, adjust the Lissajous figure to a single line (or as close as possible).
11. Switch regulator OFF and remove the filters.

B.P.F.

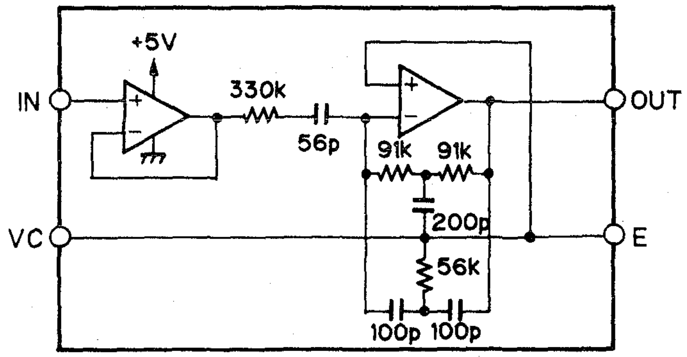

+5V
IN
330k
56p
91k
91k
200p
56k
100p
100p
OUT
VC
E

Fig. 38

TEY waveform 10ms/div, 500mV/div

Null Point

Lissajous figure (AC input)
Horizontal axis E 20mV/div
Vertical axis F 20mV/div

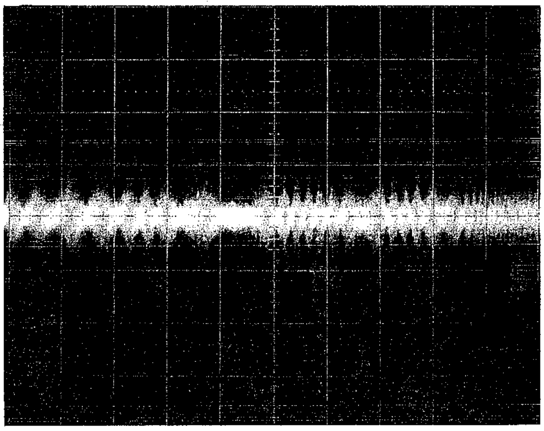


Fig. 39

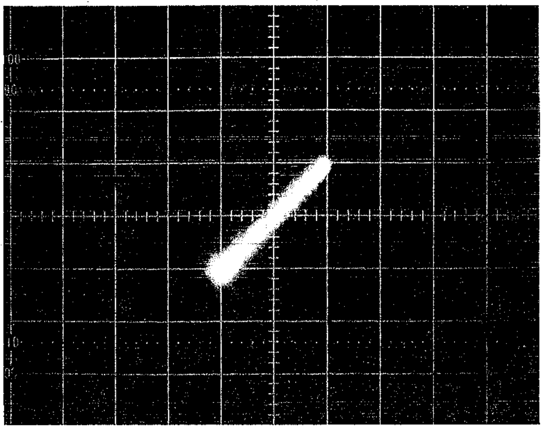


Fig. 40

"Rough" adjustment

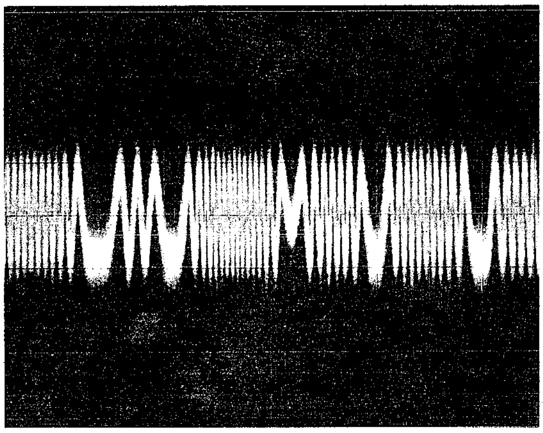


Fig. 41

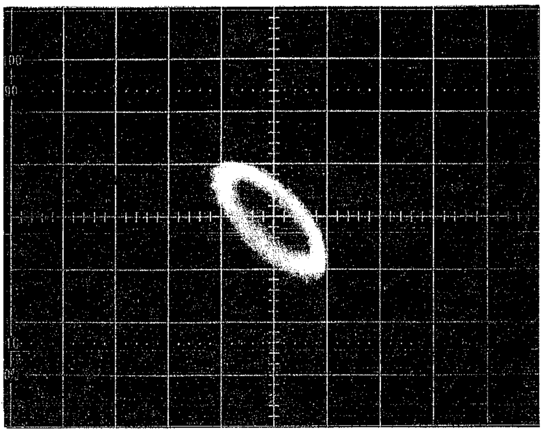


Fig. 42

Final adjustment

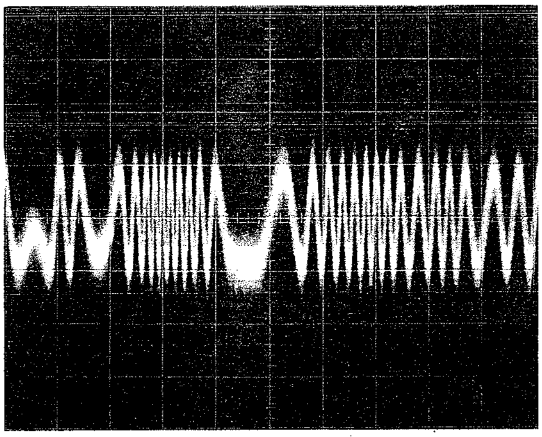


Fig. 43

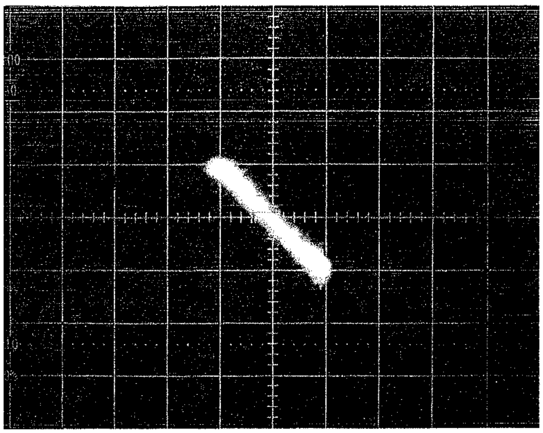


Fig. 44

6.9 Focus Bias Adjustment

- Purpose: To adjust the focus servo bias to an optimum value
- Maladjustment symptoms: Focus closing difficulty, poor playability

Measuring equipment/ jigs	• Oscilloscope
Measuring point	• RFO
Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Normal mode
Adjustment position	• VR352-1 (FEB)

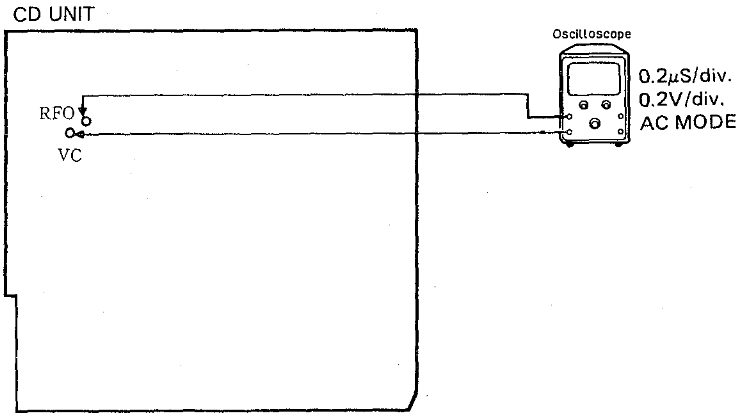
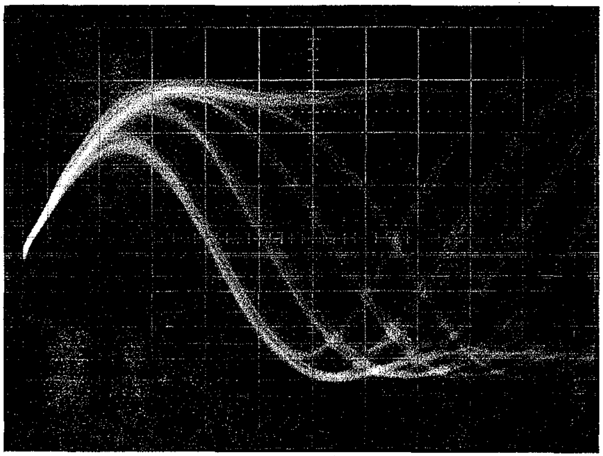


Fig. 45

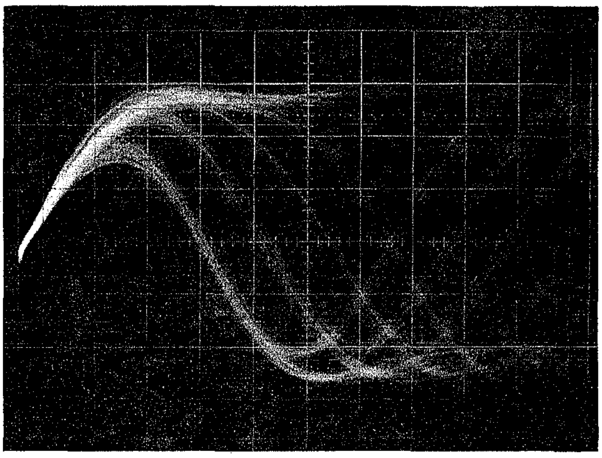
Adjustment Procedure

1. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
2. Observe RFO in respect to VC in the oscilloscope, and adjust VR352-1 (FEB) to obtain maximum RF and optimum eye pattern. (See Fig. 46 and 47)



OK

Fig. 46



0.2μs/div.
0.2V/div.
AC Mode

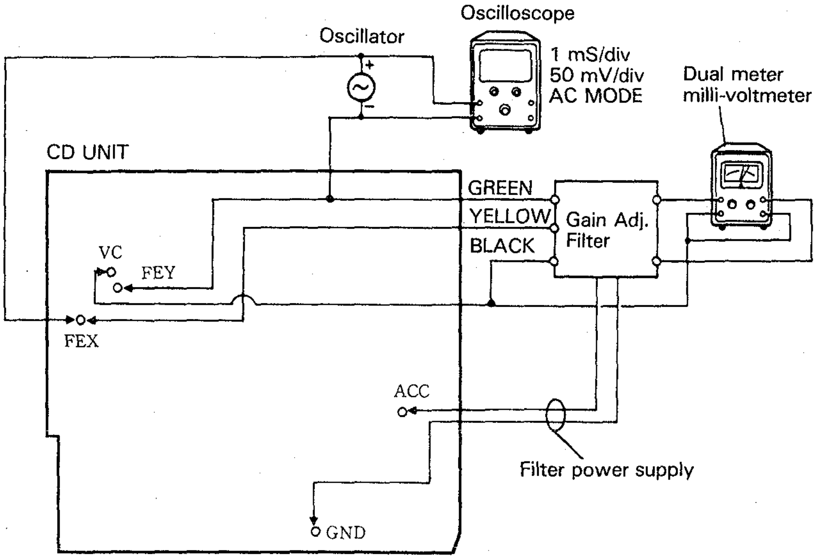
Before adjustment

Fig. 47

6.10 Focus Servo Loop Gain Adjustment

- Purpose: To adjust the focus servo loop gain to an optimum value
- Maladjustment symptoms: Poor playability, reduced resistance to vibration, focus closure fails readily

Measuring equipment/ jigs	• Oscillator, gain adjustment filter, dual meter milli-voltmeter Same as for CDX-2
Measuring point	• FEX, FEY
Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Normal mode
Adjustment position	• VR351-3 (FG)


Oscilloscope
Oscillator
1 mS/div
50 mV/div
AC MODE
Dual meter
milli-voltmeter
CD UNIT
GREEN
YELLOW
BLACK
Gain Adj. Filter
VC
FEY
FEX
ACC
Filter power supply
GND

Note: Leave the negative side of the other oscilloscope channel open.

Connect the negative milli-voltmeter lead to VC, and do not connect VC to the power supply ground.

Fig. 48

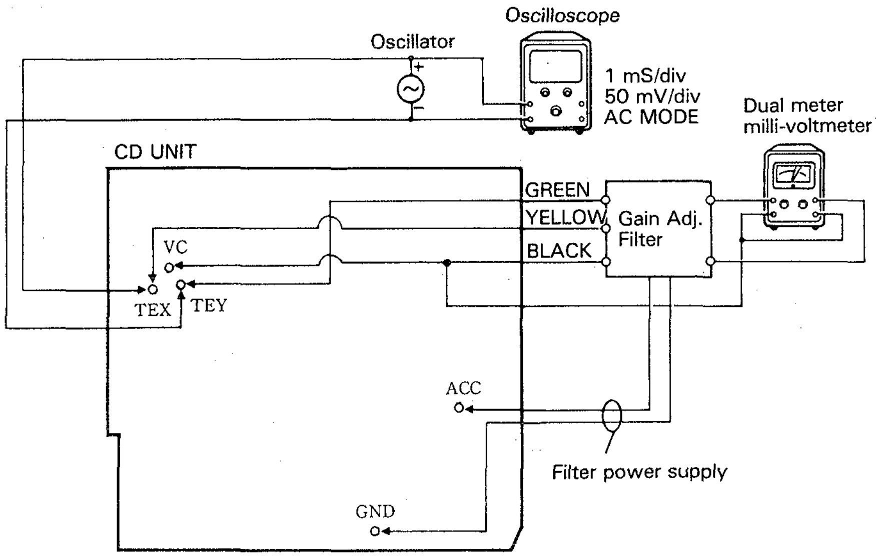
Adjustment Procedure

1. After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
2. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
3. Set the oscillator to 1kHz, and observe the FEX/FEY output in the oscilloscope. Adjust the oscillator output to obtain a FEX/FEY output of 200mVp-p.
4. Adjust VR351-3 (FG) to obtain a milli-voltmeter difference of 0 ± 0.5dB.

6.11 Tracking Servo Loop Gain Adjustment

- Purpose: To adjust the tracking servo loop gain to an optimum value
- Maladjustment symptoms: Poor playability, reduced resistance to vibration

● Measuring equipment/ jigs	• Oscillator, gain adjustment filter, dual meter milli-voltmeter
● Measuring point	• TEX, TEY
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Normal mode
● Adjustment position	• VR351-2 (TG)


Oscilloscope
Oscillator
+
−
1 mS/div
50 mV/div
AC MODE
Dual meter
milli-voltmeter
CD UNIT
GREEN
YELLOW
BLACK
Gain Adj.
Filter
VC
TEX
TEY
ACC
GND
Filter power supply

Note: Leave the negative side of the other oscilloscope channel open.

Connect the negative milli-voltmeter lead to VC, and do not connect VC to the power supply ground.

Fig. 49

Adjustment Procedure

1. After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
2. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
3. Set the oscillator to 1.4kHz, and observe the TEX/TEY output in the oscilloscope. Adjust the oscillator output to obtain a TEX/TEY output of 200mVp-p.
4. Adjust VR351-2 (TG) to obtain a milli-voltmeter difference of 0 ± 0.5dB.

6.12 TE Offset Adjustment - II

- Purpose: To adjust the electrical offset of the tracking servo to zero.
- Maladjustment symptoms: Search times too long, carriage run-away

● Measuring equipment/ jigs	• DC voltmeter
● Measuring point	• TAO low-pass filter output
● Test disc and setting	• No disc • Test mode
● Adjustment position	• VR352-2

Adjustment Procedure

Same as for TE offset adjustment - I, but with the DC voltage of the TAO LPF output adjusted to 0 ± 50mV.
The purpose of this additional adjustment is to correct any deviations generated when carrying out the tracking balance and tracking servo loop gain adjustments after completing TE offset adjustment - I.

6.13 Tracking Balance Adjustment - II

- Purpose: To adjust the tracking servo offset to zero.
- Maladjustment symptoms: Search times too long, poor playability, carriage run-away

Measuring equipment/ jigs	• Oscilloscope
Measuring point	• TEY low-pass filter output
Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Test mode
Adjustment position	• VR351-1

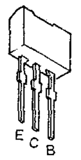
Adjustment Procedure

Steps 1 thru 5 same as tracking balance adjustment-I.

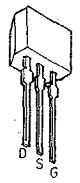
6. Check that the level difference between the positive and negative amplitudes of the TEY signal is within 5% (See Fig. 24–26). If greater than 5%, adjust with VR351-1.
7. If further adjustment was necessary in step 6, repeat TE offset adjustment - II.

ICs and Transistors

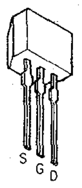
2SB1243
2SD1864
2SD1226M



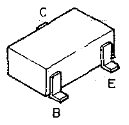
2SK241



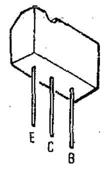
2SK330
2SJ105



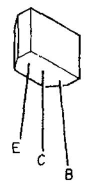
2SC2712
2SD1048



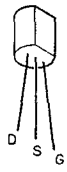
2SB822F



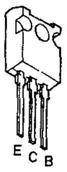
2SA1199S
2SD1468S
2SA933S



2SK435



2SA1358
2SC3421



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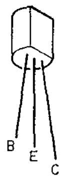
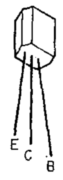
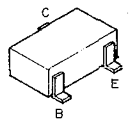
2SC2753



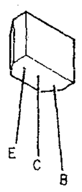
2SC2458L
2SA1048
2SA1150
2SC2458
2SC1740S
2SC3113



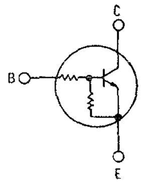
UN2111
UN2211



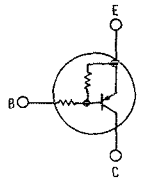
DTC124ES
DTC114ES
DTA124ES
DTA114ES
DTC343TS



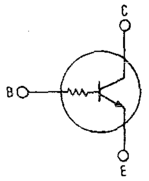
DTC124ES
DTC114ES



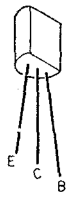
DTA124ES
DTA114ES



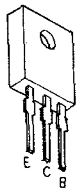
DTC343TS



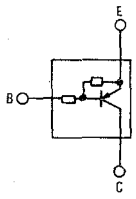
2SD667



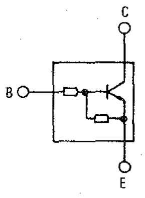
2SD1640



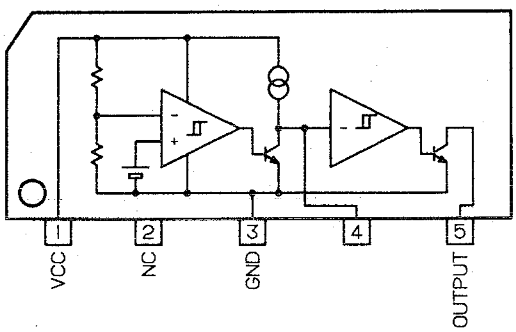
UN2111



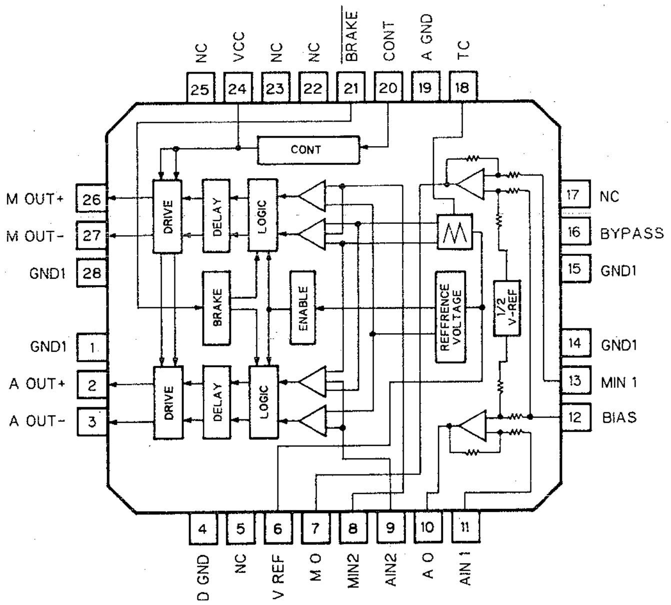
UN2211



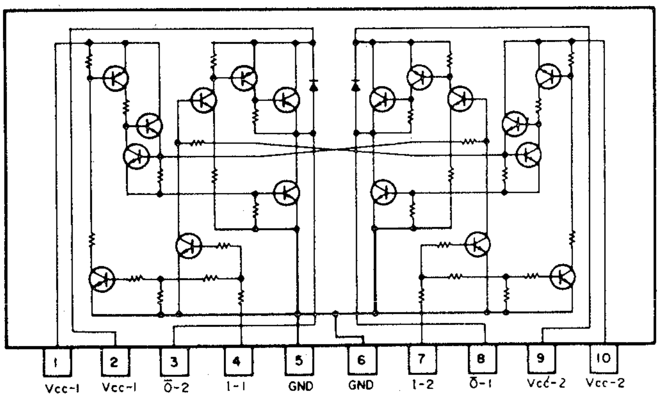
M51953BL


1
2
3
4
5
VCC
NC
GND
OUTPUT

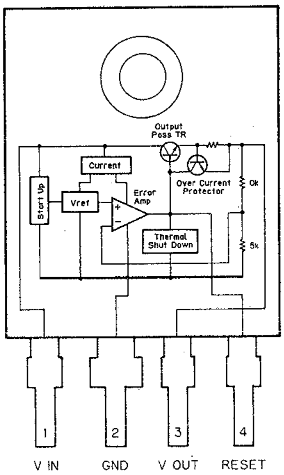
PA3023


NC
VCC
NC
NC
BRAKE
CONT
A GND
TC
25
24
23
22
21
20
19
18
CONT
M OUT+
M OUT−
GND1
26
27
28
DRIVE
DELAY
LOGIC
BRAKE
ENABLE
REFFRENCE VOLTAGE
1/2 V-REF
17
NC
16
BYPASS
15
GND1
GND1
1
A OUT+
2
A OUT−
3
DRIVE
DELAY
LOGIC
14
GND1
13
MIN 1
12
BIAS
4
5
6
7
8
9
10
11
D GND
NC
V REF
M O
MIN2
AIN2
A O
AIN 1

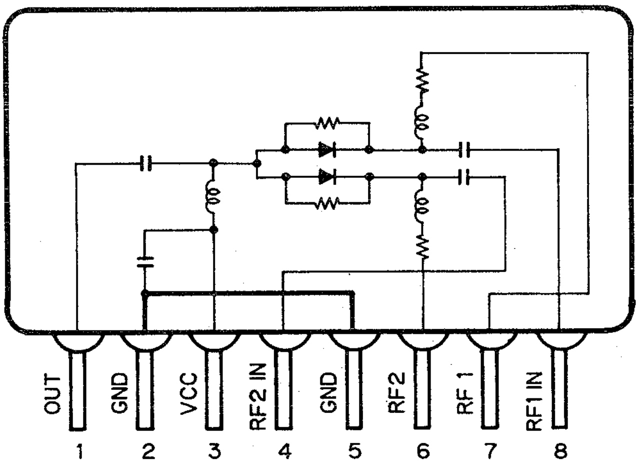
M54546AL


1
2
3
4
5
6
7
8
9
10
Vcc-1
Vcc-1
Ō-2
I-1
GND
GND
I-2
Ō-1
Vcc-2
Vcc-2

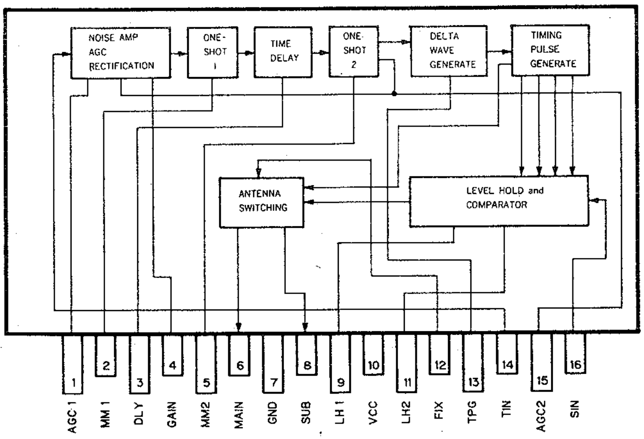
AN7805R


Output Poss TR
Current
Start Up
Vref
Error Amp
Over Current Protector
Ok
Thermal Shut Down
5k
1
2
3
4
V IN
GND
V OUT
RESET

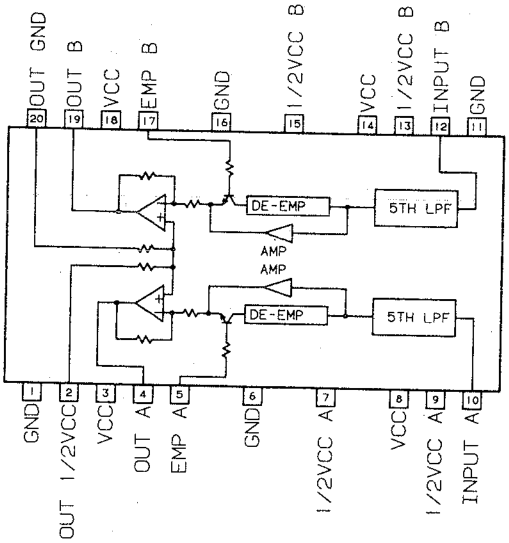
KHA805


OUT
GND
VCC
RF2 IN
GND
RF2
RF 1
RF1 IN
1
2
3
4
5
6
7
8

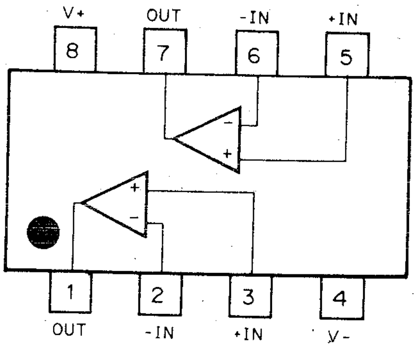
PA5011


NOISE AMP AGC RECTIFICATION
ONE-SHOT 1
TIME DELAY
ONE-SHOT 2
DELTA WAVE GENERATE
TIMING PULSE GENERATE
ANTENNA SWITCHING
LEVEL HOLD and COMPARATOR
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
AGC 1
MM 1
DLY
GAIN
MM2
MAIN
GND
SUB
LH 1
VCC
LH2
FIX
TPG
TIN
AGC2
SIN

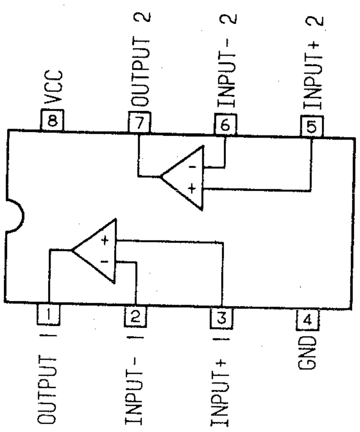
KHA221A


20 OUT GND
19 OUT B
18 VCC
17 EMP B
16 GND
15 1/2VCC B
14 VCC
13 1/2VCC B
12 INPUT B
11 GND
DE-EMP
5TH LPF
AMP
AMP
DE-EMP
5TH LPF
1 GND
2 OUT 1/2VCC
3 VCC
4 OUT A
5 EMP A
6 GND
7 1/2VCC A
8 VCC
9 1/2VCC A
10 INPUT A

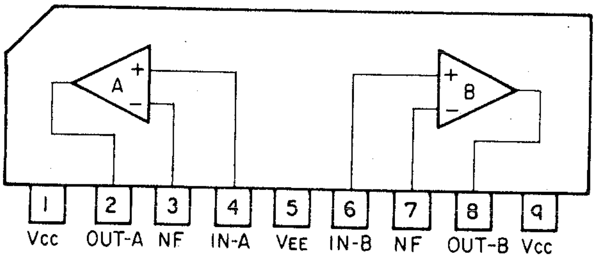
M5218FP


V+ 8
OUT 7
-IN 6
+IN 5
1 OUT
2 -IN
3 +IN
4 V-

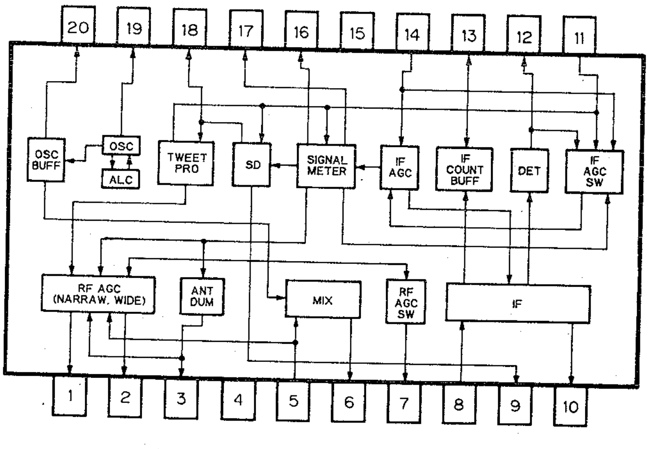
M5233FP


8 VCC
7 OUTPUT 2
6 INPUT- 2
5 INPUT+ 2
1 OUTPUT 1
2 INPUT- 1
3 INPUT+ 1
4 GND

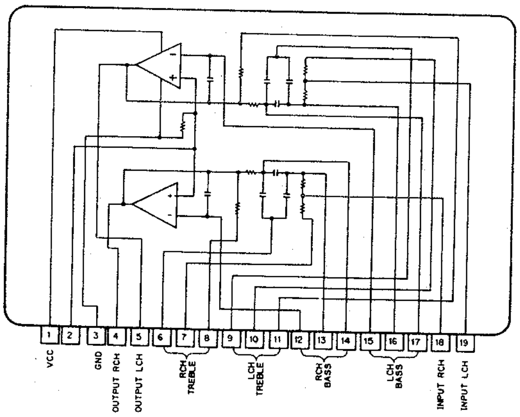
TA75558S


A
B
1 Vcc
2 OUT-A
3 NF
4 IN-A
5 VEE
6 IN-B
7 NF
8 OUT-B
9 Vcc

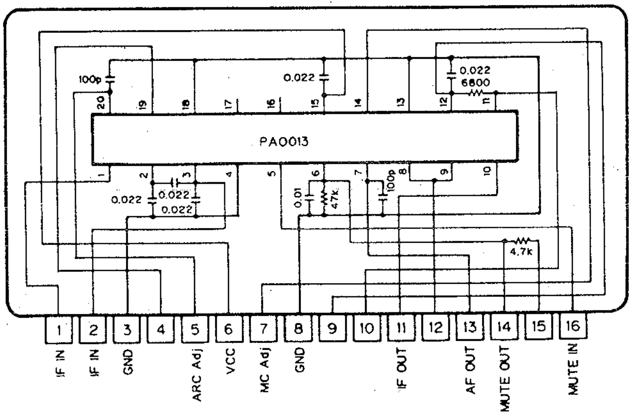
LA1137N


20
19
18
17
16
15
14
13
12
11
OSC BUFF
OSC
ALC
TWEET PRO
SD
SIGNAL METER
IF AGC
IF COUNT BUFF
DET
IF AGC SW
RF AGC (NARRAW. WIDE)
ANT DUM
MIX
RF AGC SW
IF
1
2
3
4
5
6
7
8
9
10

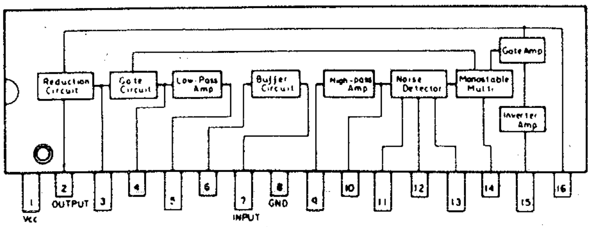
KHA125


1 VCC
2
3 GND
4 OUTPUT RCH
5 OUTPUT LCH
6 7 8 RCH TREBLE
9 10 11 LCH TREBLE
12 13 14 RCH BASS
15 16 17 LCH BASS
18 INPUT RCH
19 INPUT LCH

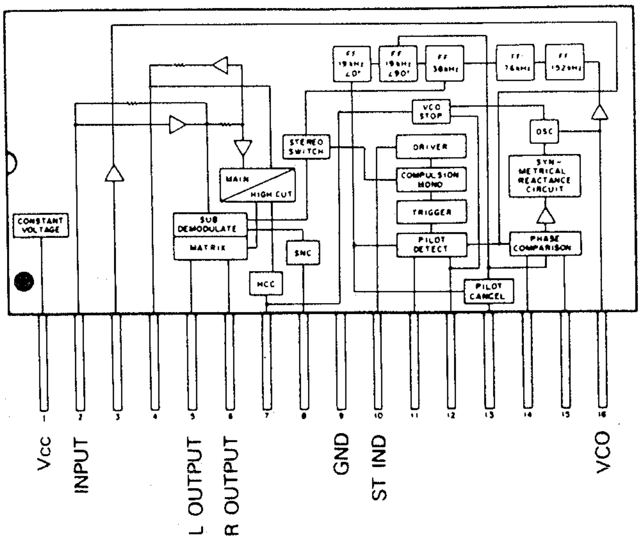
KHA141A


PA0013
100p
0.022
0.022
6800
0.022
0.022
0.022
0.01
47k
100p
4.7k
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
IF IN
IF IN
GND
ARC Adj
VCC
MC Adj
GND
IF OUT
AF OUT
MUTE OUT
MUTE IN

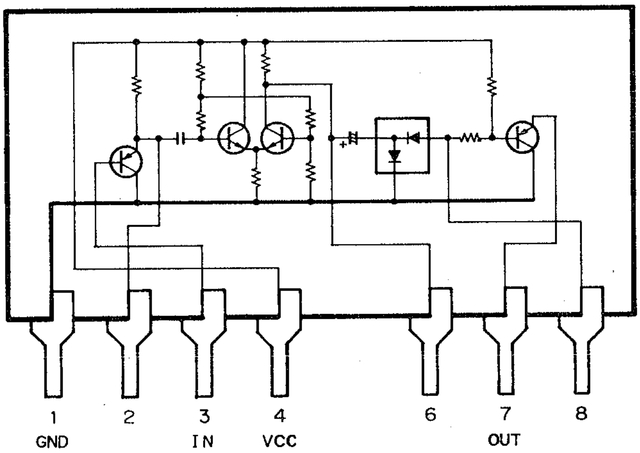
LA2110


Reduction Circuit
Gate Circuit
Low Pass Amp
Buffer Circuit
High-pass Amp
Noise Detector
Monostable Multi
Gate Amp
Inverter Amp
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
Vcc
OUTPUT
INPUT
GND

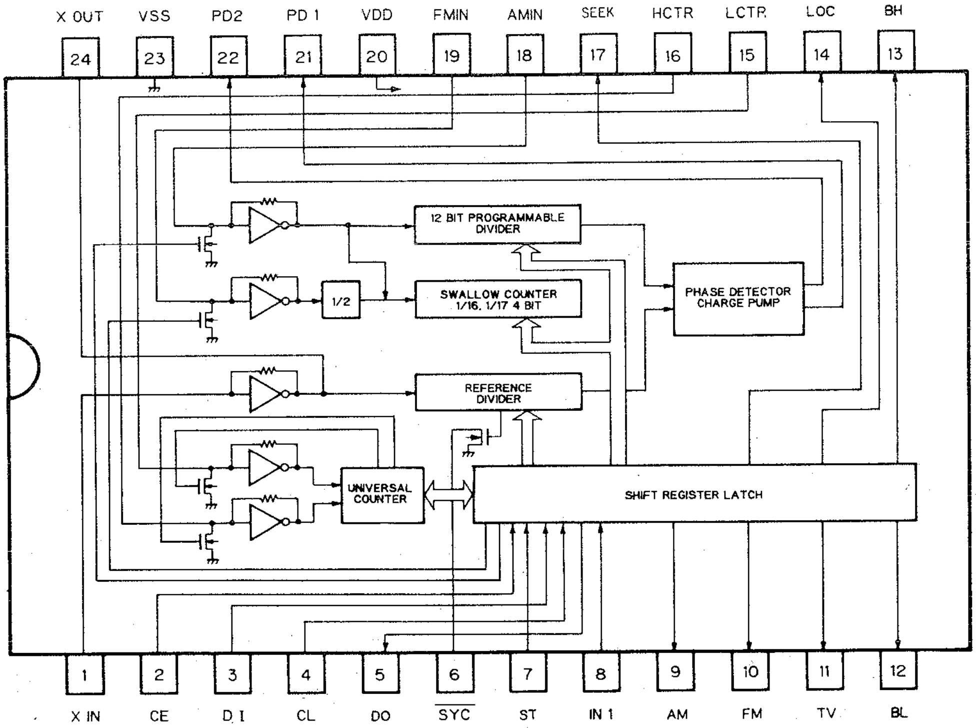
LA3430P


CONSTANT VOLTAGE
SUB DEMODULATE
MATRIX
MAIN
HIGH CUT
STEREO SWITCH
MCC
SNC
FF 19kHz ∠0°
FF 19kHz ∠90°
FF 38kHz
FF 76kHz
FF 152kHz
VCO STOP
DRIVER
COMPULSION MONO
TRIGGER
PILOT DETECT
PILOT CANCEL
OSC
SYN-METRICAL REACTANCE CIRCUIT
PHASE COMPARISON
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
Vcc
INPUT
L OUTPUT
R OUTPUT
GND
ST IND
VCO

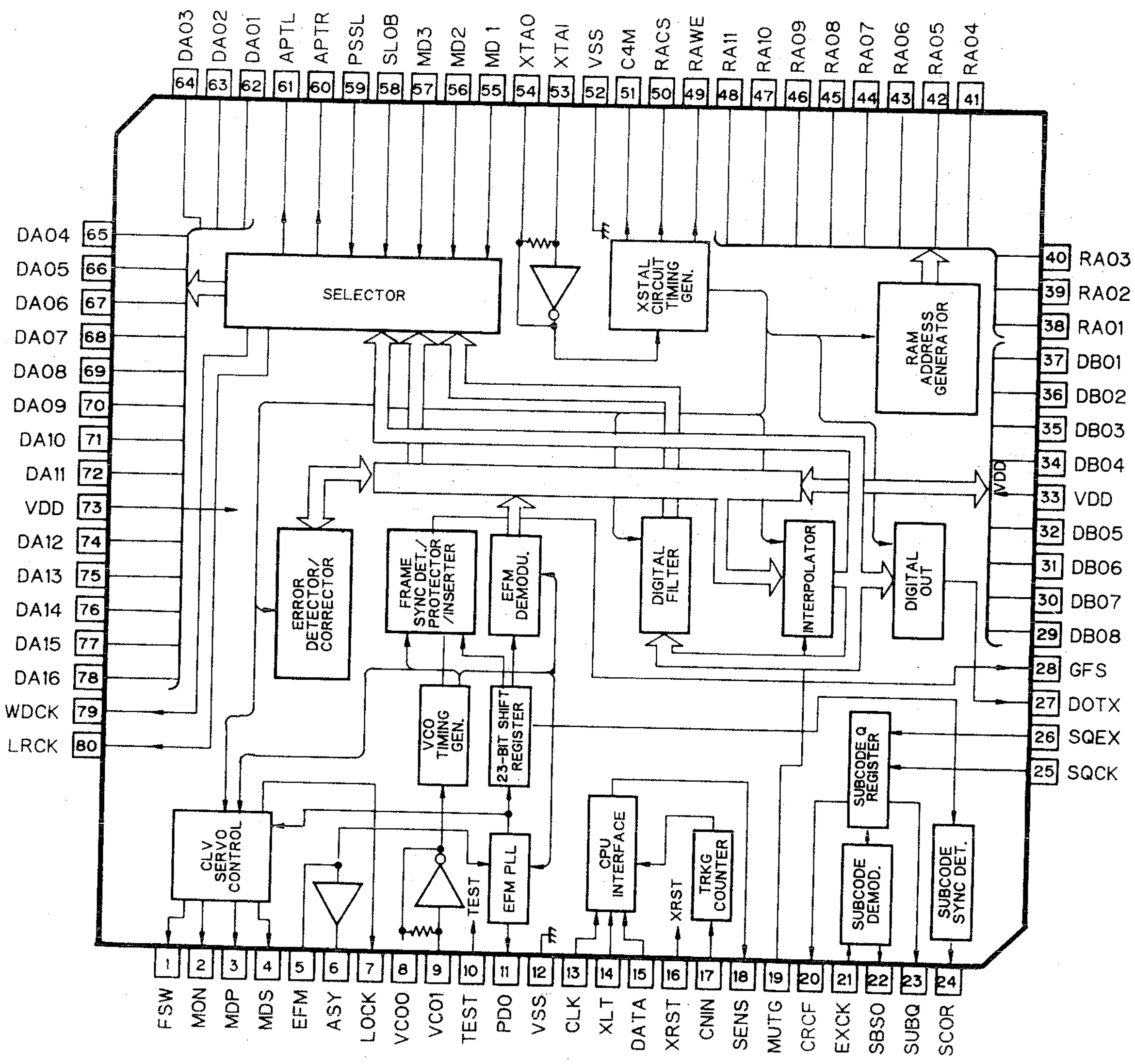
KHA505


1
2
3
4
6
7
8
GND
IN
VCC
OUT

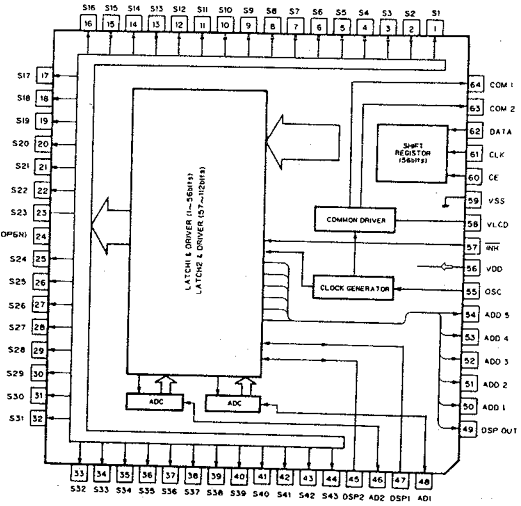
LC7218


X OUT
VSS
PD2
PD 1
VDD
FMIN
AMIN
SEEK
HCTR
LCTR
LOC
BH
24
23
22
21
20
19
18
17
16
15
14
13
12 BIT PROGRAMMABLE DIVIDER
1/2
SWALLOW COUNTER 1/16, 1/17 4 BIT
PHASE DETECTOR CHARGE PUMP
REFERENCE DIVIDER
UNIVERSAL COUNTER
SHIFT REGISTER LATCH
1
2
3
4
5
6
7
8
9
10
11
12
X IN
CE
D I
CL
DO
SYC
ST
IN 1
AM
FM
TV
BL

*CXD1135Q

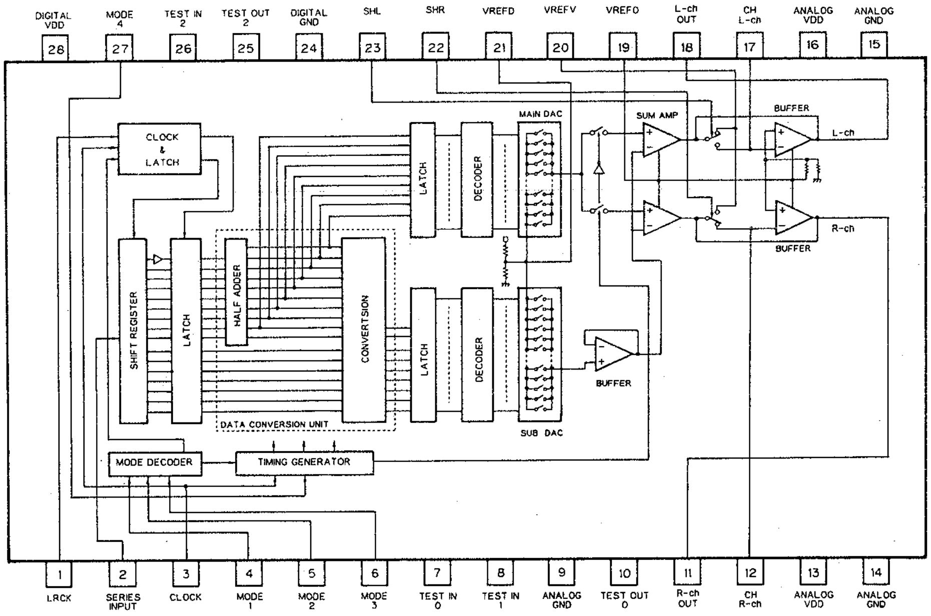

DA03 64
DA02 63
DA01 62
APTL 61
APTR 60
PSSL 59
SLOB 58
MD3 57
MD2 56
MD 1 55
XTAO 54
XTAI 53
VSS 52
C4M 51
RACS 50
RAWE 49
RA11 48
RA10 47
RA09 46
RA08 45
RA07 44
RA06 43
RA05 42
RA04 41
DA04 65
DA05 66
DA06 67
DA07 68
DA08 69
DA09 70
DA10 71
DA11 72
VDD 73
DA12 74
DA13 75
DA14 76
DA15 77
DA16 78
WDCK 79
LRCK 80
40 RA03
39 RA02
38 RA01
37 DB01
36 DB02
35 DB03
34 DB04
33 VDD
32 DB05
31 DB06
30 DB07
29 DB08
28 GFS
27 DOTX
26 SQEX
25 SQCK
1 FSW
2 MON
3 MDP
4 MDS
5 EFM
6 ASY
7 LOCK
8 VCOO
9 VCO1
10 TEST
11 PDO
12 VSS
13 CLK
14 XLT
15 DATA
16 XRST
17 CNIN
18 SENS
19 MUTG
20 CRCF
21 EXCK
22 SBSO
23 SUBQ
24 SCOR
SELECTOR
XSTAL CIRCUIT TIMING GEN.
RAM ADDRESS GENERATOR
VDD
ERROR DETECTOR/ CORRECTOR
FRAME SYNC DET./ PROTECTOR /INSERTER
EFM DEMODU.
DIGITAL FILTER
INTERPOLATOR
DIGITAL OUT
VCO TIMING GEN.
23-BIT SHIFT REGISTER
SUBCODE Q REGISTER
CLV SERVO CONTROL
TEST
EFM PLL
CPU INTERFACE
XRST
TRKG COUNTER
SUBCODE DEMOD.
SUBCODE SYNC DET.

LC7582P

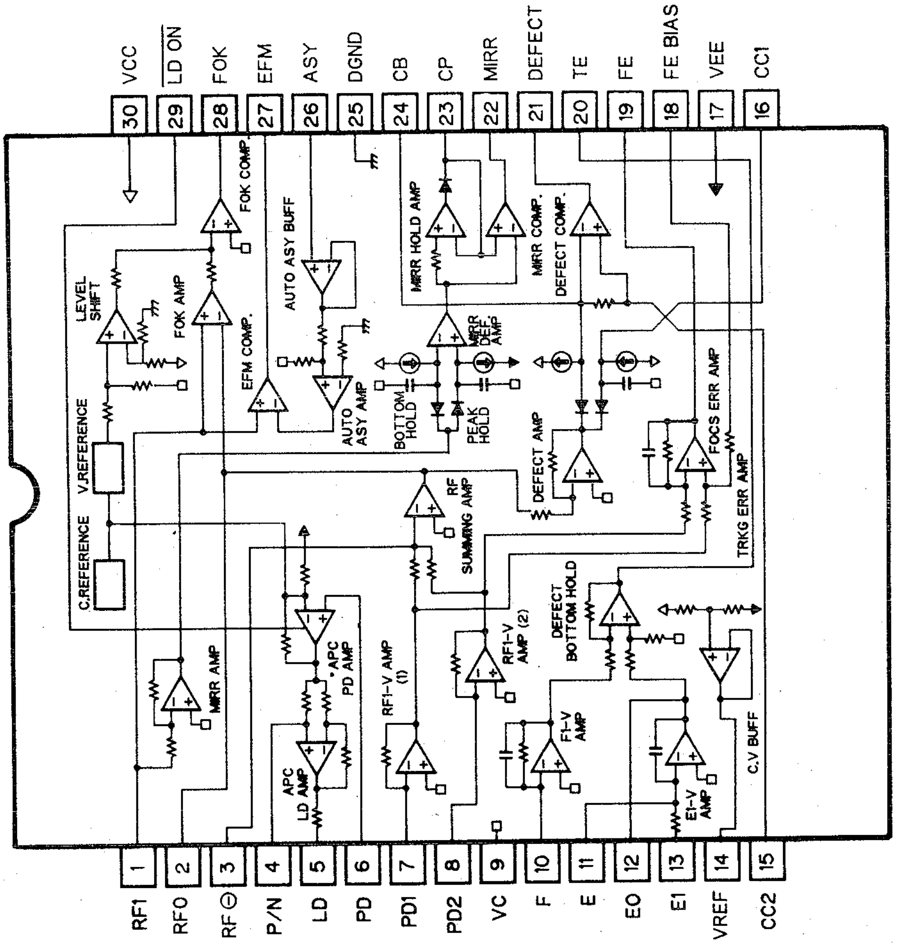

S16 16
S15 15
S14 14
S13 13
S12 12
S11 11
S10 10
S9 9
S8 8
S7 7
S6 6
S5 5
S4 4
S3 3
S2 2
S1 1
S17 17
S18 18
S19 19
S20 20
S21 21
S22 22
S23 23
(OPEN) 24
S24 25
S25 26
S26 27
S27 28
S28 29
S29 30
S30 31
S31 32
64 COM 1
63 COM 2
62 DATA
61 CLK
60 CE
59 VSS
58 VLCD
57 INH
56 VDD
55 OSC
54 ADD 5
53 ADD 4
52 ADD 3
51 ADD 2
50 ADD 1
49 DSP OUT
33 S32
34 S33
35 S34
36 S35
37 S36
38 S37
39 S38
40 S39
41 S40
42 S41
43 S42
44 S43
45 DSP2
46 AD2
47 DSP1
48 AD1
LATCH1 & DRIVER (1~56bits)
LATCH2 & DRIVER (57~112bits)
SHIFT REGISTOR (56bits)
COMMON DRIVER
CLOCK GENERATOR
ADC
ADC

*IC's marked by * are MOS type.*
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

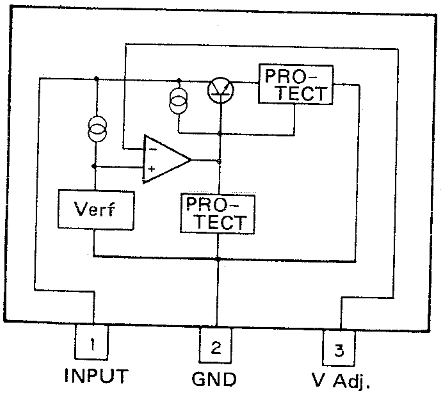
*μPD6355G


DIGITAL VDD
28
MODE 4
27
TEST IN 2
26
TEST OUT 2
25
DIGITAL GND
24
SHL
23
SHR
22
VREFD
21
VREFV
20
VREFO
19
L-ch OUT
18
CH L-ch
17
ANALOG VDD
16
ANALOG GND
15
CLOCK & LATCH
SHIFT REGISTER
LATCH
HALF ADDER
CONVERTSION
DATA CONVERSION UNIT
LATCH
DECODER
MAIN DAC
LATCH
DECODER
SUB DAC
SUM AMP
BUFFER
L-ch
BUFFER
R-ch
BUFFER
MODE DECODER
TIMING GENERATOR
1
LRCK
2
SERIES INPUT
3
CLOCK
4
MODE 1
5
MODE 2
6
MODE 3
7
TEST IN 0
8
TEST IN 1
9
ANALOG GND
10
TEST OUT 0
11
R-ch OUT
12
CH R-ch
13
ANALOG VDD
14
ANALOG GND

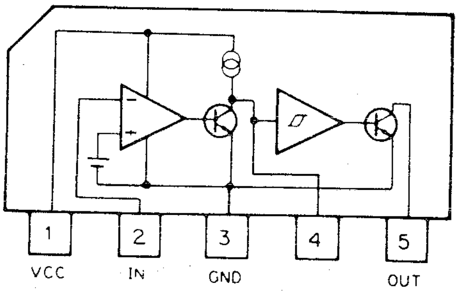
*CXA1081M


VCC
30
LD ON
29
FOK
28
EFM
27
ASY
26
DGND
25
CB
24
CP
23
MIRR
22
DEFECT
21
TE
20
FE
19
FE BIAS
18
VEE
17
CC1
16
FOK COMP.
LEVEL SHIFT
FOK AMP
AUTO ASY BUFF
EFM COMP.
AUTO ASY AMP
MIRR HOLD AMP
MIRR COMP.
DEFECT COMP.
MIRR DEF. AMP
BOTTOM HOLD
PEAK HOLD
DEFECT AMP
FOCS ERR AMP
TRKG ERR AMP
V.REFERENCE
C.REFERENCE
RF SUMMING AMP
*APC PD AMP
APC LD AMP
MIRR AMP
RFI-V AMP (1)
RFI-V AMP (2)
DEFECT BOTTOM HOLD
F1-V AMP
E1-V AMP
C.V BUFF
1
RF1
2
RFO
3
RF ⊖
4
P/N
5
LD
6
PD
7
PD1
8
PD2
9
VC
10
F
11
E
12
EO
13
E1
14
VREF
15
CC2

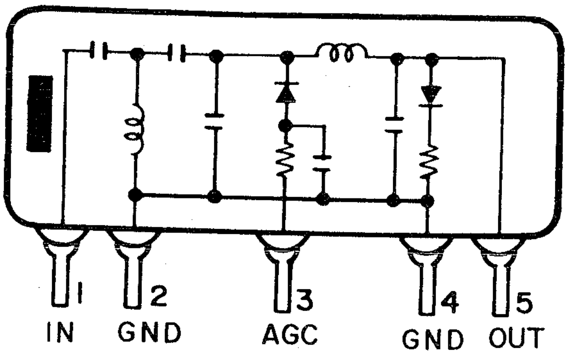
M5236L


PRO-
TECT
Verf
PRO-
TECT
1
INPUT
2
GND
3
V Adj.

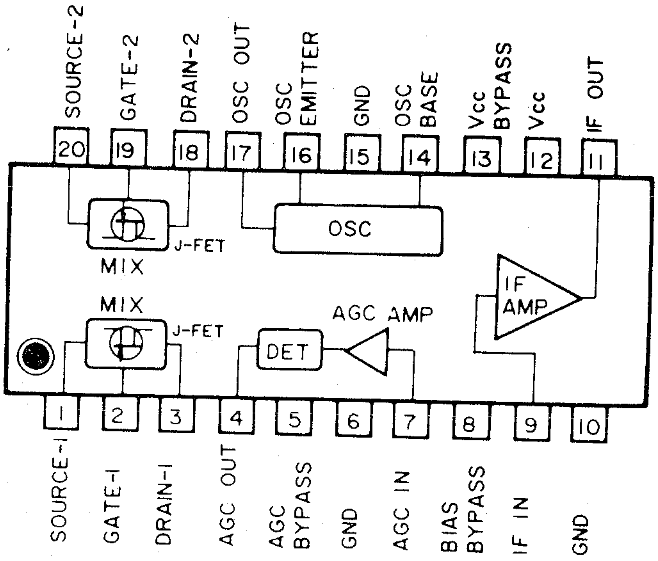
M51957BL


1
VCC
2
IN
3
GND
4
5
OUT

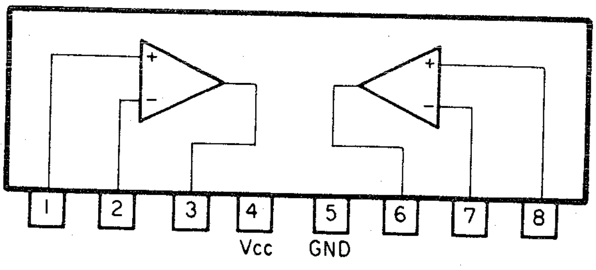
CWW1015


1
IN
2
GND
3
AGC
4
GND
5
OUT

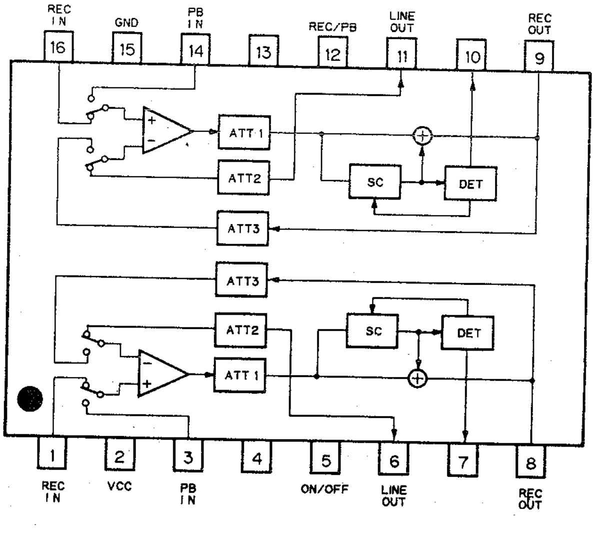
PA4009


SOURCE-2
GATE-2
DRAIN-2
OSC OUT
OSC EMITTER
GND
OSC BASE
Vcc BYPASS
Vcc
IF OUT
20
19
18
17
16
15
14
13
12
11
MIX
J-FET
OSC
MIX
J-FET
DET
AGC AMP
IF AMP
1
2
3
4
5
6
7
8
9
10
SOURCE-1
GATE-1
DRAIN-1
AGC OUT
AGC BYPASS
GND
AGC IN
BIAS BYPASS
IF IN
GND

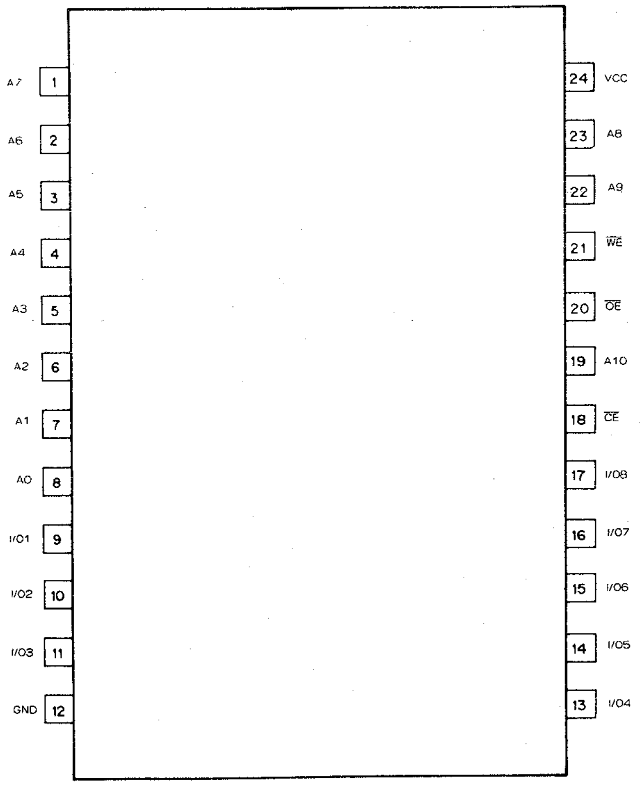
M51522AL


+
−
+
−
1
2
3
4
Vcc
5
GND
6
7
8

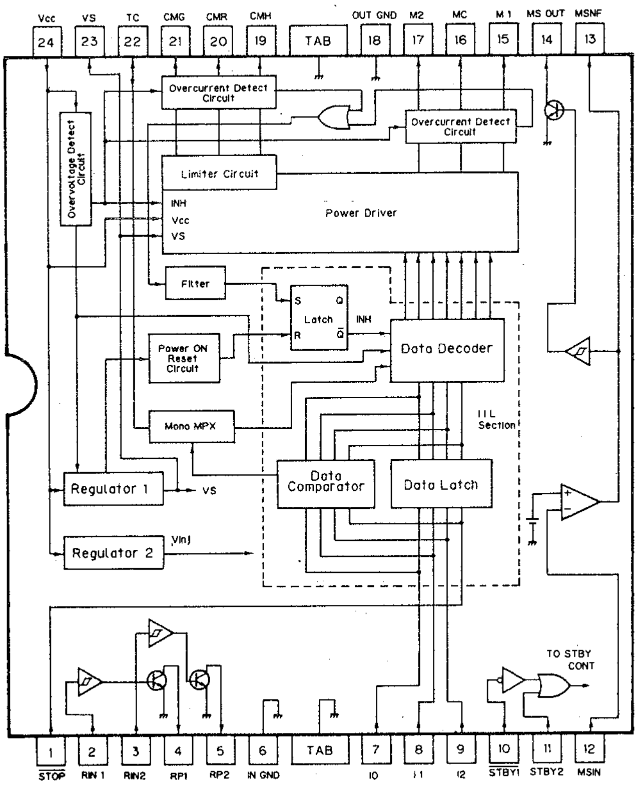
CXA1102P


REC IN
16
GND
15
PB IN
14
13
REC/PB
12
LINE OUT
11
10
REC OUT
9
ATT 1
ATT2
ATT3
SC
DET
ATT3
ATT2
SC
DET
ATT 1
1
REC IN
2
VCC
3
PB IN
4
5
ON/OFF
6
LINE OUT
7
8
REC OUT

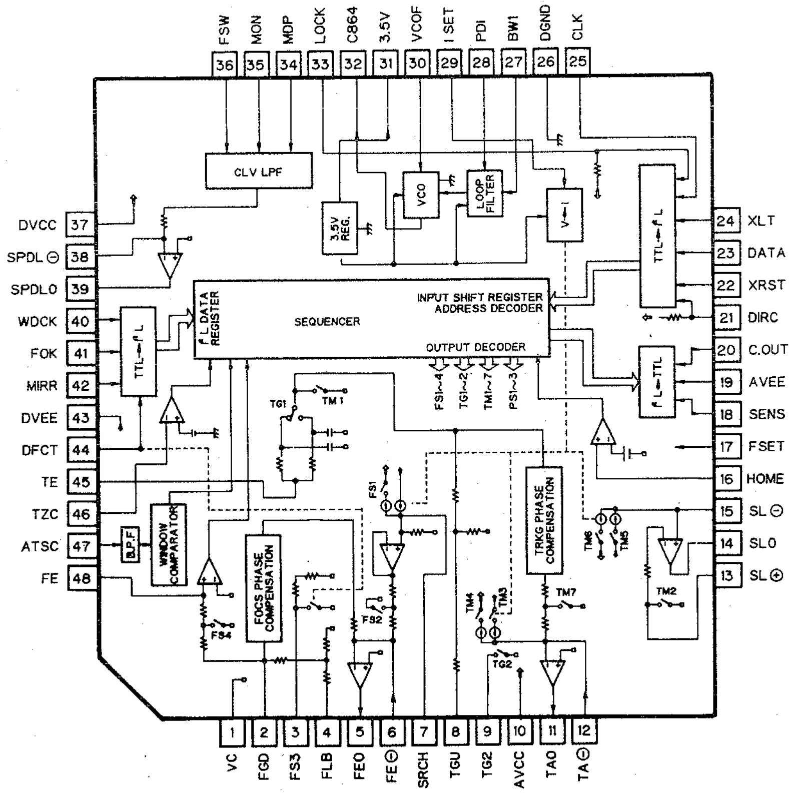
*CXK5816M-15L


A7 1
A6 2
A5 3
A4 4
A3 5
A2 6
A1 7
A0 8
I/O1 9
I/O2 10
I/O3 11
GND 12
24 VCC
23 A8
22 A9
21 WE
20 OE
19 A10
18 CE
17 I/O8
16 I/O7
15 I/O6
14 I/O5
13 I/O4

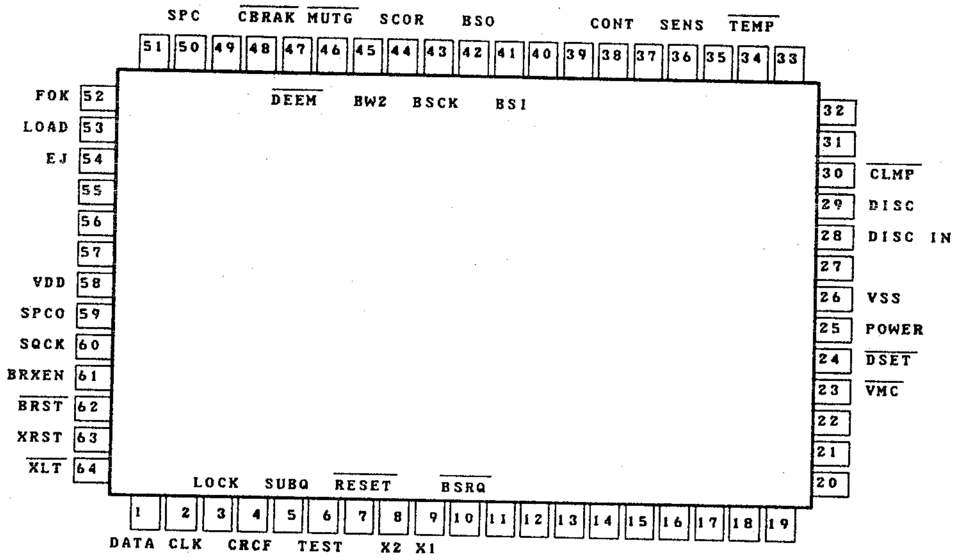
PA3022A


Vcc 24
VS 23
TC 22
CMG 21
CMR 20
CMH 19
TAB
OUT GND 18
M2 17
MC 16
M1 15
MS OUT 14
MSNF 13
Overcurrent Detect Circuit
Overcurrent Detect Circuit
Overvoltage Detect Circuit
Limiter Circuit
INH
Vcc
VS
Power Driver
Filter
S Q
Latch INH
R Q
Data Decoder
Power ON Reset Circuit
Mono MPX
IIL Section
Data Comparator
Data Latch
Regulator 1
VS
Regulator 2
Vinj
TO STBY CONT
1 STOP
2 RIN 1
3 RIN2
4 RP1
5 RP2
6 IN GND
TAB
7 I0
8 I1
9 I2
10 STBY1
11 STBY2
12 MSIN

*CXA1082AQ


FSW 36
MON 35
MDP 34
LOCK 33
C864 32
3.5V 31
VCOF 30
I SET 29
PDI 28
BW1 27
DGND 26
CLK 25
CLV LPF
3.5V REG.
VCO
LOOP FILTER
V→I
TTL→I²L
DVCC 37
SPDL⊖ 38
SPDLO 39
WDCK 40
FOK 41
MIRR 42
DVEE 43
DFCT 44
TE 45
TZC 46
ATSC 47
FE 48
TTL→I²L
I²L DATA REGISTER
SEQUENCER
INPUT SHIFT REGISTER
ADDRESS DECODER
OUTPUT DECODER
FS1~4
TG1~2
TM1~7
PS1~3
I²L→TTL
24 XLT
23 DATA
22 XRST
21 DIRC
20 C.OUT
19 AVEE
18 SENS
17 FSET
16 HOME
15 SL⊖
14 SLO
13 SL⊕
TG1
TM1
FS1
B.P.F.
WINDOW COMPARATOR
FOCS PHASE COMPENSATION
FS2
FS4
TRKG PHASE COMPENSATION
TM4
TM3
TG2
TM7
TM6
TM5
TM2
1 VC
2 FGD
3 FS3
4 FLB
5 FEO
6 FE⊖
7 SRCH
8 TGU
9 TG2
10 AVCC
11 TAO
12 TA⊖

*PD4136B

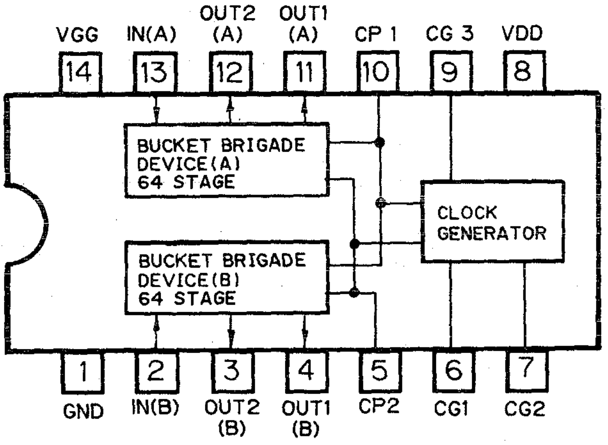

SPC
CBRAK
MUTG
SCOR
BSO
CONT
SENS
TEMP
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
DEEM
BW2
BSCK
BSI
FOK 52
LOAD 53
EJ 54
55
56
57
VDD 58
SPCO 59
SQCK 60
BRXEN 61
BRST 62
XRST 63
XLT 64
32
31
30 CLMP
29 DISC
28 DISC IN
27
26 VSS
25 POWER
24 DSET
23 VMC
22
21
20
LOCK
SUBQ
RESET
BSRQ
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
DATA
CLK
CRCF
TEST
X2
X1

Pin Functions (PD4136B)

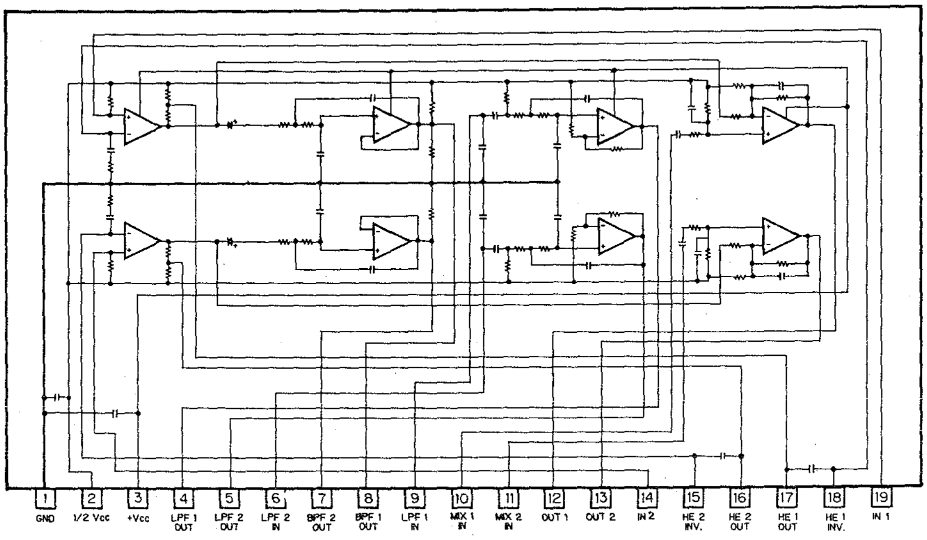
Pin No.	Pin Name	I/O	Function and Operation
1	DATA	CMOS IN	Serial data output
2	CLK	CMOS OUT	Serial data clock output
3	LOCK	CMOS IN	Spindle lock monitor "H"=Lock
4	CRCF	CMOS IN	CRC check result input "H"=CRC OK
5	SUBQ	CMOS IN	Sub-code data input
6	TEST	CMOS IN	Test input
7	$\overline{\text{RESET}}$	CMOS IN	Reset input
8	X2	CMOS OUT	Oscillator output
9	X1	CMOS IN	Oscillator input
10	$\overline{\text{BSRQ}}$	CMOS OUT	Service request line "L"=Request
23	$\overline{\text{VMC}}$	CMOS OUT	Loading power supply control
24	$\overline{\text{DSET}}$	CMOS OUT	Disc set LED control
25	POWER	CMOS OUT	Regulator ON/OFF control "H"=Regulator ON
26	VSS	—	Ground
28	DISC IN	CMOS IN	Door switch input "H"=Door open

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th colspan="5">Function and Operation</th></tr>
<tr><td>29</td><td>DISC</td><td>CMOS IN</td><td colspan="5">Disc sensor input "H"=Disc loaded</td></tr>
<tr><td>30</td><td>$\overline{\text{CLMP}}$</td><td>CMOS IN</td><td colspan="5">Disc clamped input "L"=Disc clamped</td></tr>
<tr><td>34</td><td>$\overline{\text{TEMP}}$</td><td>INPUT</td><td colspan="5">High temperature detector</td></tr>
<tr><td>36</td><td>SENS</td><td>CMOS IN</td><td colspan="5">CD LSI internal status monitor input</td></tr>
<tr><td>38</td><td>CONT</td><td>CMOS OUT</td><td colspan="5">PWM driver ON/OFF "H"=ON</td></tr>
<tr><td>41</td><td>BSI</td><td>CMOS IN</td><td colspan="5">Bus data input</td></tr>
<tr><td>42</td><td>BSO</td><td>CMOS OUT</td><td colspan="5">Bus data output</td></tr>
<tr><td>43</td><td>BSCK</td><td>IN/OUT</td><td colspan="5">Bus serial clock CMOS Input/Output</td></tr>
<tr><td>44</td><td>SCOR</td><td>CMOS IN</td><td colspan="5">Sub-code synchronization input</td></tr>
<tr><td>45</td><td>BW2</td><td>OUTPUT</td><td colspan="5">Spindle motor output filter time constant selection output
High resistivity N channel open drain</td></tr>
<tr><td>46</td><td>$\overline{\text{MUTG}}$</td><td>OUTPUT</td><td colspan="5">Muting output "L"=Mute ON</td></tr>
<tr><td>47</td><td>$\overline{\text{DEEM}}$</td><td>OUTPUT</td><td colspan="5">Emphasis selector output "H"=Emphasis ON
High resistivity N channel open drain</td></tr>
<tr><td>48</td><td>$\overline{\text{CBRAK}}$</td><td>OUTPUT</td><td colspan="5">PWM driver brake control "L"=Brake ON</td></tr>
<tr><td>50</td><td>SPC</td><td>CMOS IN</td><td colspan="5">Spindle motor rpm indicator "L"=Low speed</td></tr>
<tr><td>52</td><td>FOK</td><td>CMOS IN</td><td colspan="5">Indication that focus is closed and RF input is active</td></tr>
<tr><td>53</td><td>LOAD</td><td rowspan="3">OUTPUT</td><td rowspan="3">Motor drive output
High resistivity
N channel open drain</td><td>LOAD</td><td>H</td><td>L</td><td>H</td></tr>
<tr><td rowspan="2">54</td><td rowspan="2">EJ</td><td>EJ</td><td>L</td><td>H</td><td>H</td></tr>
<tr><td></td><td>Load</td><td>Eject</td><td>Stop</td></tr>
<tr><td>58</td><td>VDD</td><td>——</td><td colspan="5"></td></tr>
<tr><td>59</td><td>SPCO</td><td>CMOS OUT</td><td colspan="5">Spindle motor rpm sensor circuit ON/OFF</td></tr>
<tr><td>60</td><td>SQCK</td><td>CMOS OUT</td><td colspan="5">Sub-code clock</td></tr>
<tr><td>61</td><td>BRXEN</td><td>CMOS OUT</td><td colspan="5">Bus reception enable output "Hi-Z"= Reception enable</td></tr>
<tr><td>62</td><td>$\overline{\text{BRST}}$</td><td>CMOS IN</td><td colspan="5">Bus reset</td></tr>
<tr><td>63</td><td>XRST</td><td>CMOS OUT</td><td colspan="5">CD LSI reset output "L"=Reset</td></tr>
<tr><td>64</td><td>$\overline{\text{XLT}}$</td><td>CMOS OUT</td><td colspan="5">Serial data latch output</td></tr>
</table>

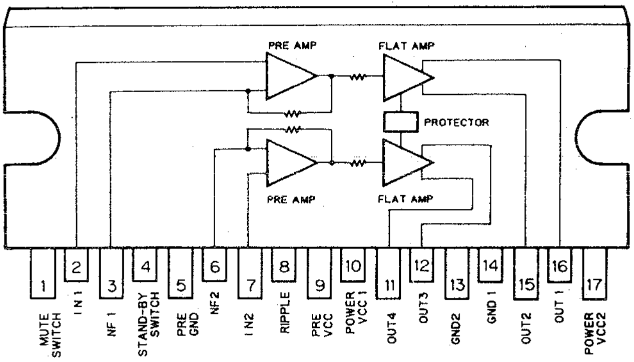
MN3003


VGG
IN(A)
OUT2 (A)
OUT1 (A)
CP 1
CG 3
VDD
14
13
12
11
10
9
8
BUCKET BRIGADE DEVICE(A) 64 STAGE
CLOCK GENERATOR
BUCKET BRIGADE DEVICE(B) 64 STAGE
1
2
3
4
5
6
7
GND
IN(B)
OUT2 (B)
OUT1 (B)
CP2
CG1
CG2

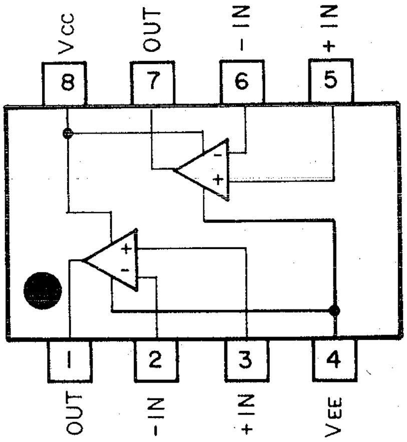
CWW1059


1 GND
2 1/2 Vcc
3 +Vcc
4 LPF 1 OUT
5 LPF 2 OUT
6 LPF 2 IN
7 BPF 2 OUT
8 BPF 1 OUT
9 LPF 1 IN
10 MIX 1 IN
11 MIX 2 IN
12 OUT 1
13 OUT 2
14 IN 2
15 HE 2 INV.
16 HE 2 OUT
17 HE 1 OUT
18 HE 1 INV.
19 IN 1

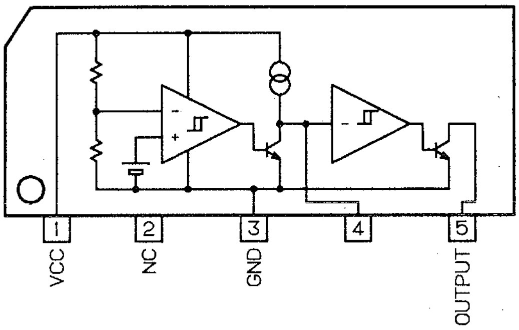
TA8215H


PRE AMP
FLAT AMP
PROTECTOR
PRE AMP
FLAT AMP
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
MUTE SWITCH
IN 1
NF 1
STAND-BY SWITCH
PRE GND
NF2
IN2
RIPPLE
PRE VCC
POWER VCC 1
OUT4
OUT3
GND2
GND 1
OUT2
OUT 1
POWER VCC2

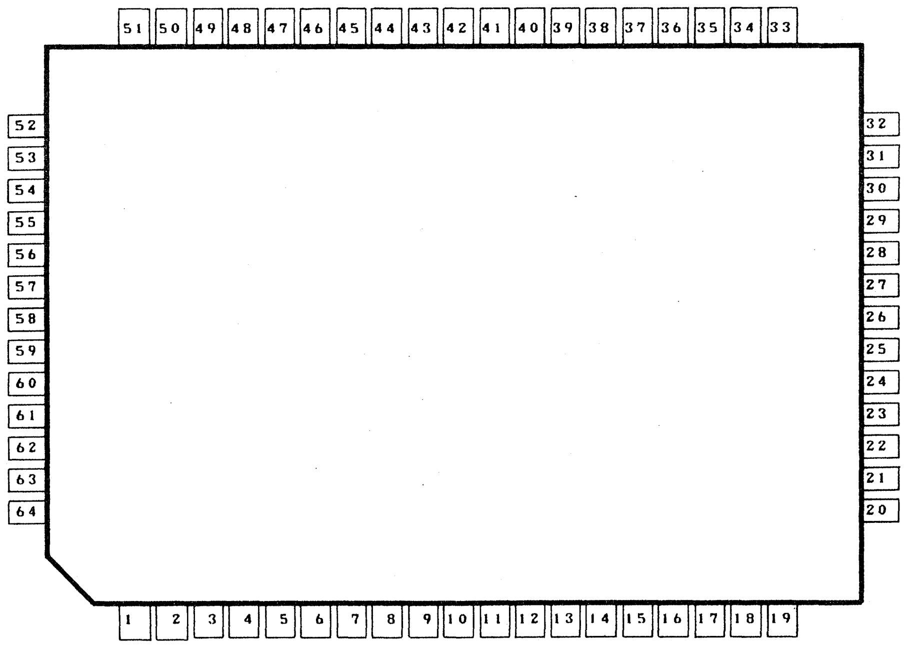
NJM4558MD
NJM2068MD


VCC
OUT
- IN
+ IN
8
7
6
5
1
2
3
4
OUT
- IN
+ IN
VEE

M51953BL


1
2
3
4
5
VCC
NC
GND
OUTPUT

*PD4155B



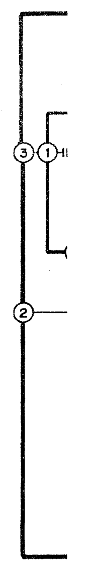
• Pin Functions (PD4155B)

Pin	Pin Name	I/O	Output Format	Standby	Function and Operation
1	PCE	O	C		PLL IC (LC7218) Chip enable
2	NR	O	C	L	Dolby NR switching
3	$\overline{\mathrm{LINH}}$	O	C		LCD driver (LC7582) inhibit output
4	LCK	O	C		LCD driver (LC7582) clock line
5	LDT	O	C		LCD driver (LC7582) data output
6	LCE	O	C		LCD driver (LC7582) chip enable
7	$\overline{\mathrm{RESET}}$	I			Reset signal input pin
8	X2				Clock generator pin
9	X1				Clock generator pin
10	$\overline{\mathrm{PLAY}}$	O	C	L	MS filter swiching
11	CM	O	C	L	Capstan motor control
12	$\overline{\mathrm{NES}}$	I			Forward side reel unit ratation pulse pin.
13	$\overline{\mathrm{RES}}$	I			Reverse side reel unit ratation pulse pin.
14	$\overline{\mathrm{STBY1}}$	O		L	PA3022 standby output pin.
15	I_2	O		L	Mechanism control data output pin. Outputs control data for the mechanism driver IC (PA3022)
16	I_1	O		L	
17	I_0	O		L	
18	MD3	I			Mechanism switch input pin.
19	MD2	I			
20	MD1	I			
21	MD0	I			

Pin	Pin Name	I/O	Output Format	Standby	Function and Operation
22	MST2	O		L	Mechanism switch strobe output pin.
23	MST1	O		L	
24	MST0	O		L	
25	METAL	O		L	Equalizer switch output pin.
26	VSS				GND
27	$\overline{\mathrm{BSENS}}$	I			Backup voltage detection input pin.
28	$\overline{\mathrm{ASENS}}$	I			ACC voltage detection input pin.
29	$\overline{\mathrm{MS}}$	I			Music signal input pin.
30	$\overline{\mathrm{PWSW}}$	I			TUNER power on/off input pin.
31−33	NC				
34	SDLEV	I			TUNER SD level detection input.
35	$\overline{\mathrm{LOCIN}}$	I			During AM opration, detects illumination voltage and switches LOC/DX.
36	PCLCNT	I			Clock output authorization input
37	MUTE		C	H	Mute output pin.
38	PCL/TUNANT	O	C	H/L	Clock output/TUNER antenna output pin.
39	PEE	O	C		Key touch beep output pin
40	SYSPW	O	C	L	Power amplifier ON output pin.
41	BSI	I			Bus data input pin
42	BSO	O			Bus data output pin
43	$\overline{\mathrm{BSCK}}$	I/O			Communications clock input/output pin.
44	$\overline{\mathrm{BSRQ}}$	I			Data communications serial poll request.
45	$\overline{\mathrm{TAPPW}}$	O	NM	H (Hiz)	DECK power supply control
46	$\overline{\mathrm{TUNPW}}$	O	NM	H (Hiz)	TUNER power supply control
47	KST1	O	NM	Hiz	Key matrix strobe output.
48	KST0	O	NM	Hiz	Key matrix stroe output.
49−52	KST5−KST2	O	NM	Hiz	Key matrix strobe output.
53−56	KD3−KD0	I			Key matrix return input.
57	NC				
58	VDD				
59	DISB	O	C	H/L	AUX operation disable
60	$\overline{\mathrm{BRST}}$	O	C	L	Bus reset
61	AUX IN	I			AUX operation input
62	PDI	I			LC7218: Data input
63	PCK	O	C		LC7218: Clock
64	PDT	O	C		LC7218: Data output

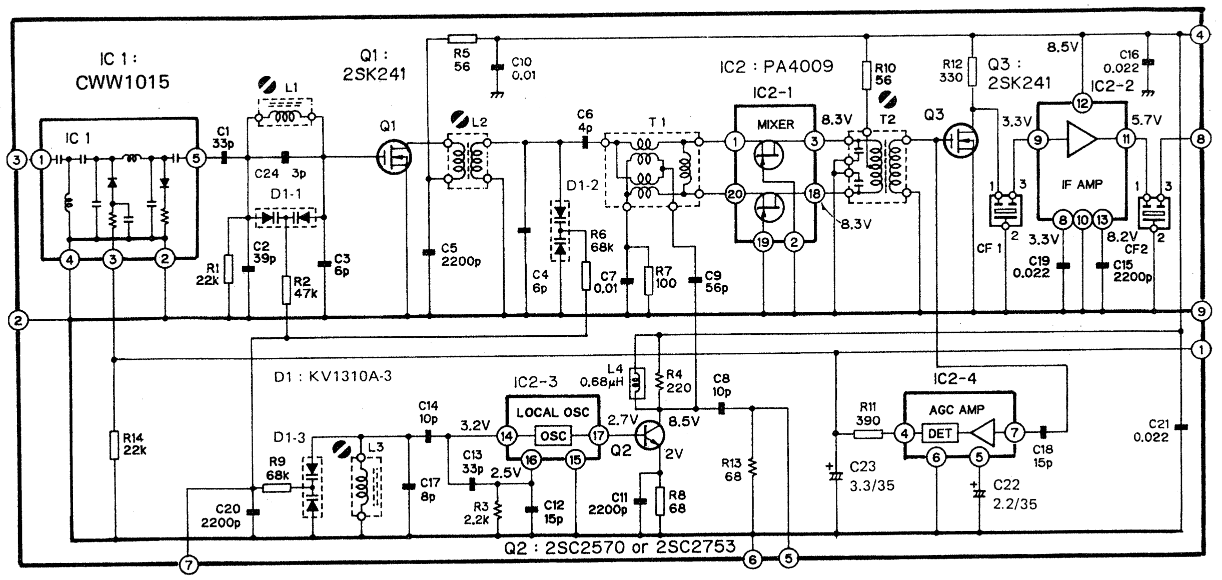
Output format	Meaning
C	C-MOS
NM	Neutral resistivity N channel open drain

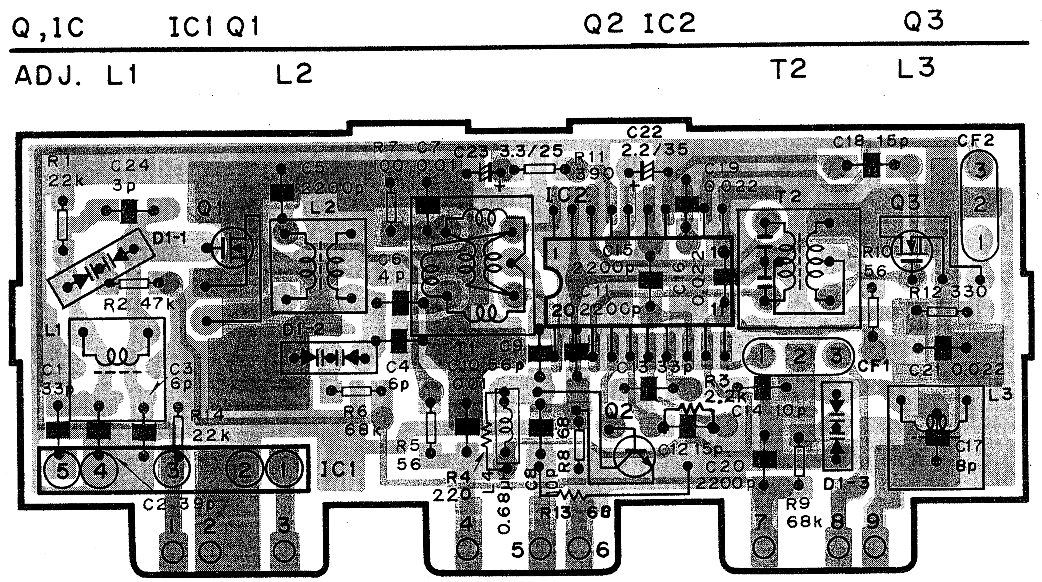
• FM FF



DX.

• FM FRONT END (CWB1005)


IC 1 :
CWW1015
IC 1
Q1 :
2SK241
L1
L2
C1 33p
C24 3p
D1-1
C2 39p
C3 6p
R1 22k
R2 47k
R5 56
C10 0.01
C5 2200p
C6 4p
T 1
D1-2
R6 68k
C4 6p
C7 0.01
R7 100
C9 56p
IC2 : PA4009
IC2-1
MIXER
8.3V
T2
R10 56
R12 330
Q3 :
2SK241
Q3
3.3V
8.5V
C16 0.022
IC2-2
5.7V
IF AMP
CF 1
CF2
C19 0.022
C15 2200p
8.2V
R14 22k
D1 : KV1310A-3
D1-3
R9 68k
L3
C20 2200p
C14 10p
3.2V
IC2-3
0.68µH
L4
R4 220
C8 10p
LOCAL OSC
OSC
2.7V
8.5V
Q2
2V
C13 33p
2.5V
C17 8p
R3 2.2k
C12 15p
C11 2200p
R8 68
R13 68
Q2 : 2SC2570 or 2SC2753
R11 390
IC2-4
AGC AMP
DET
C23 3.3/35
C18 15p
C22 2.2/35
C21 0.022

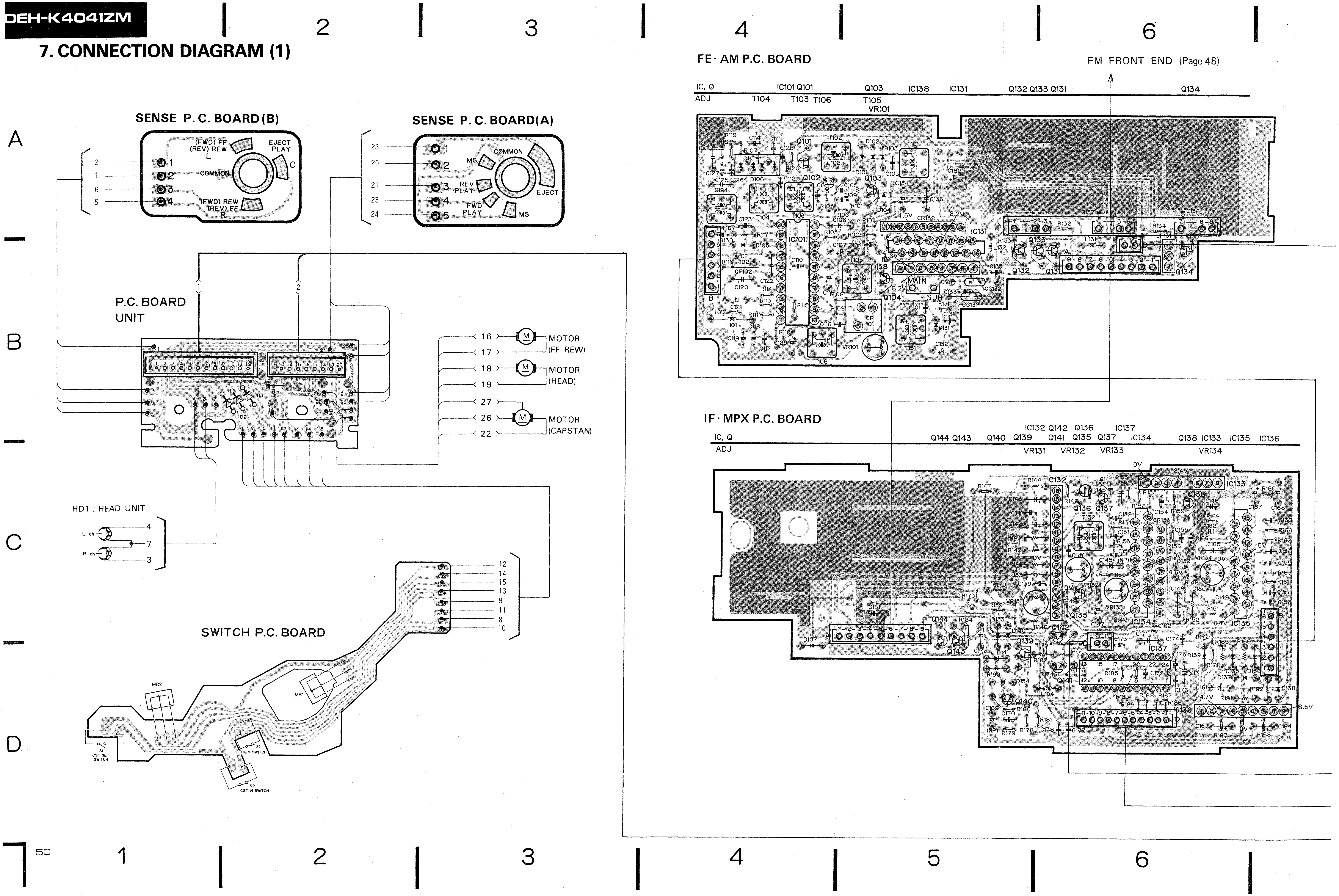

Q ,IC
IC1 Q1
Q2 IC2
Q3
ADJ. L1
L2
T2
L3
R1 22k
C24 3p
D1-1
R2 47k
L1
C1 33p
C3 6p
R14 22k
C2 39p
IC1
C5 2200p
L2
C6 4p
R7
C7
C4 6p
R6 68k
R5 56
R4 220
0.68
C8 10p
R8 68
R13 68
C23 3.3/25
R11 390
C22 2.2/35
C15 2200p
C11 2200p
C19 0.022
C13 33p
R3 2.2k
C14 10p
C12 15p
C20 2200p
Q2
T2
C18 15p
CF2
Q3
R10 56
R12 330
CF1
C21 0.022
L3
C17 8p
D1-3
R9 68k

● Circuit Diagram Symbols

Symbol	Function
A	1/4 division detector output used in detection of RF and focus signal
ACC	14.4V
AGND	Analog ground
ASY	Asymmetry
ATSC	Anti-shock (carriage motor control during playback)
B	1/4 division detector output used in detection of RF and focus signal
BATT	14.4V (Constant power supply)
BDATA	Bus data signal
BRST	Bus reset signal
BRXEN	Bus line busy signal
BSCK	Bus synchronizing shift clock
BSRQ	Bus service request line
BYPS1	Bypass 1 (non-drive enabled by connecting to ground during PWM IC651 operation)
BYPS2	Bypass 2 (non-drive enabled by connecting to ground during PWM IC652 operation)
C	1/4 division detector output used in detection of RF and focus signal
CBRAKE	PWM driver brake control signal (brake on when ''L'')
CLAMP	Disc set detect signal
CM +	Carriage motor drive signal (PWM OUT)
CM −	
CONT	PWM driver ON/OFF signal (ON when ''H'')
D	1/4 division detector output used in detection of RF and focus signal
DEEM	Emphasis selector switch (emphasis ON when ''H'')
DFCT	DEFECT signal (''H'' when defect)
DGND	Digital ground
DISC	Disc presence detector signal
E	Tracking signal start detector
EFM	8-14 modulation
EJ	Eject key
END	Carriage mechanism END position detector signal
F	Tracking signal end detector
FA +	Focus actuator drive signal (PWM OUT)
FA −	
FAIN	Focus drive PWM input signal
FEO	Focus signal output (IC601, CXA1082AQ pin no.5)

Symbol	Function
FEO2	Focus 2 (IC655 pin no.1)
FLOAT	Carriage mechanism play position detector signal
HOME	Home position detector signal (pick-up at home position when ''L'')
IN1	Motor control signal 1
IN2	Motor control signal 2
IN3	Motor control signal 3
ISETY	ISET resistance pin (IC601 pin no.31)
LAMP	Photo-interrupter drive signal
LD	Laser diode
LOAD	Disc loading power supply ON/OFF signal
MON	Motor ON (spindle forward or reverse when ''H'')
MD	Monitor diode
$\overline{\text{MUTG}}$	Mute signal (muting ON when ''L'')
POWER	Power supply control signal
REG5	+ 5V
SLO	Carriage output signal (IC601 pin no.14)
SM +	Spindle motor drive signals (PWM OUT)
SM −	
SPC	Spindle motor rpm detector signal (low speed when ''L'', IC656 pin nos.1 & 7)
SPCO	Spindle brake (spindle brake when ''H'', IC751 pin no. 59)
SPDLO	Spindle motor error signal (IC601 pin no.39)
SPTAO	Tracking side path signal output
SMIN	Spindle motor drive PWM input signal
STBY	Standby position detector signal
TA +	Tracking actuator drive signals (PWM OUT)
TA −	
TAIN	Tracking actuator drive PWM input signal
TEND	Mechanism clamped switching line
TGU	Tracking side path input
TIG	Switch ground
TOG	Switch ground
TZC	T.E zero-cross signal
VC	Signal reference voltage (2.5V)
VREF	Signal reference voltage buffer output (2.5V)

7. CONNECTION DIAGRAM (1)


1
2
3
4
5
6
A
B
C
D
SENSE P.C. BOARD (B)
(FWD) FF
(REV) REW
L
EJECT
PLAY
C
COMMON
(FWD) REW
(REV) FF
R
SENSE P.C. BOARD (A)
COMMON
MS
REV PLAY
FWD PLAY
EJECT
MS
P.C. BOARD UNIT
MOTOR (FF REW)
MOTOR (HEAD)
MOTOR (CAPSTAN)
HD1 : HEAD UNIT
L-ch
R-ch
SWITCH P.C. BOARD
MR1
MR2
S1 CST SET SWITCH
S2 CST IN SWITCH
S3 70μS SWITCH
FE · AM P.C. BOARD
FM FRONT END (Page 48)
IC, Q
ADJ
IC101 Q101
Q103
IC138
IC131
Q132 Q133 Q131
Q134
T104
T103 T106
T105
VR101
MAIN
SUB
IF · MPX P.C. BOARD
IC132 Q142 Q136
IC137
Q144 Q143
Q140 Q139
Q141 Q135 Q137
IC134
Q138 IC133
IC135
IC136
VR131
VR132
VR133
VR134
0V
8.4V
8.5V
4.7V

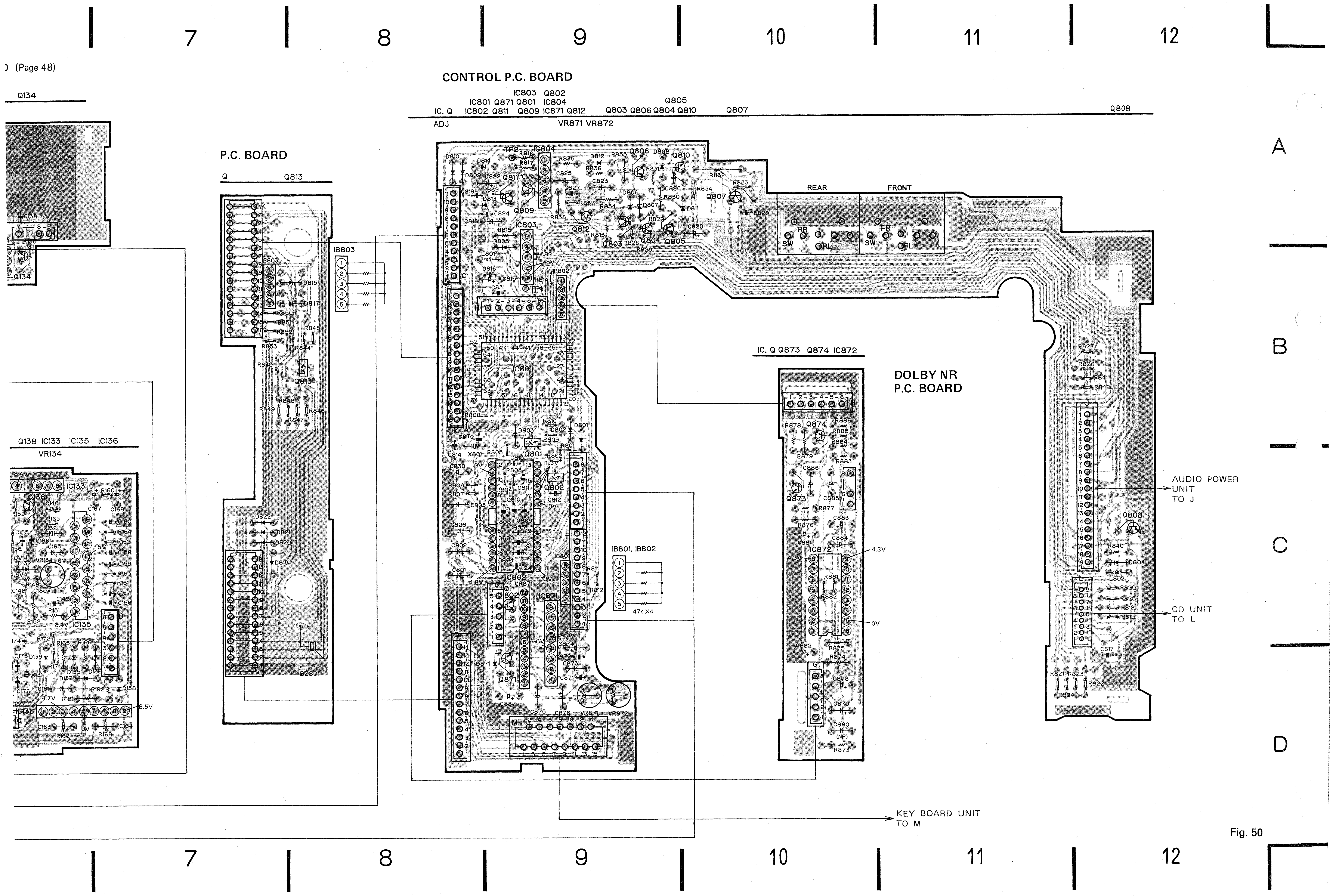
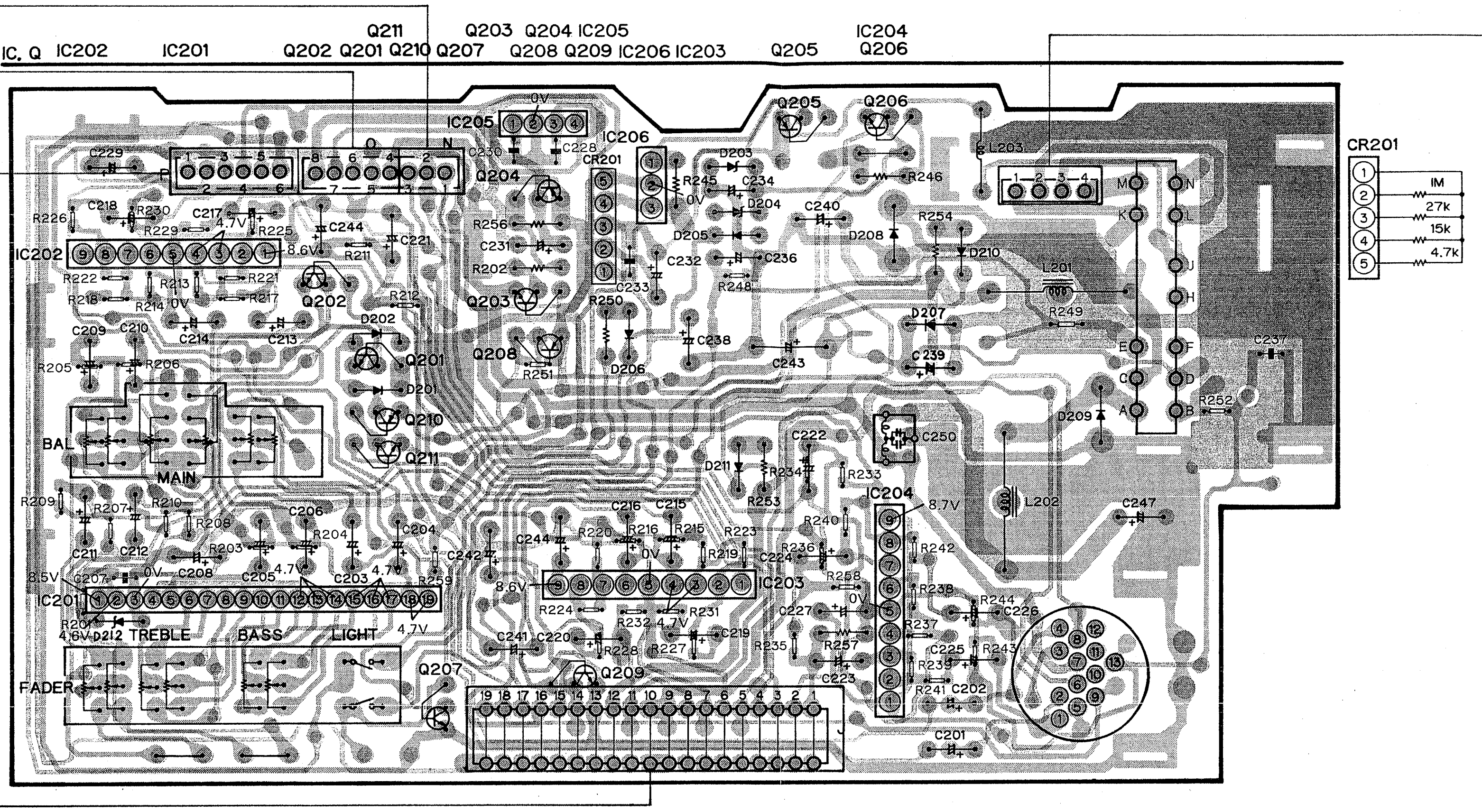

(Page 48)
CONTROL P.C. BOARD
IC, Q
ADJ
IC801 IC802
Q871 Q811
IC803 Q801 Q809
Q802 IC804 IC871 Q812
VR871 VR872
Q803 Q806
Q805 Q804 Q810
Q807
Q808
P.C. BOARD
Q
Q813
Q134
IB803
REAR
FRONT
RR
FR
SW
RL
FL
IB801, IB802
47k X4
IC, Q Q873 Q874 IC872
DOLBY NR P.C. BOARD
AUDIO POWER UNIT TO J
CD UNIT TO L
KEY BOARD UNIT TO M
Q138 IC133 IC135 IC136
VR134
BZ801
7
8
9
10
11
12
A
B
C
D

Fig. 50

AUDIO POWER UNIT

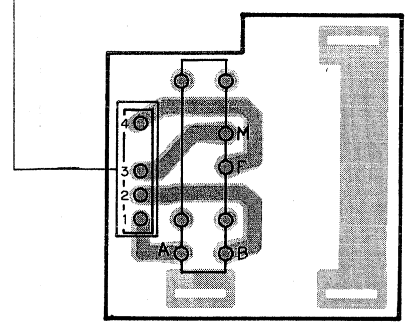
CD UNIT TO CN352

CD UNIT TO CN353

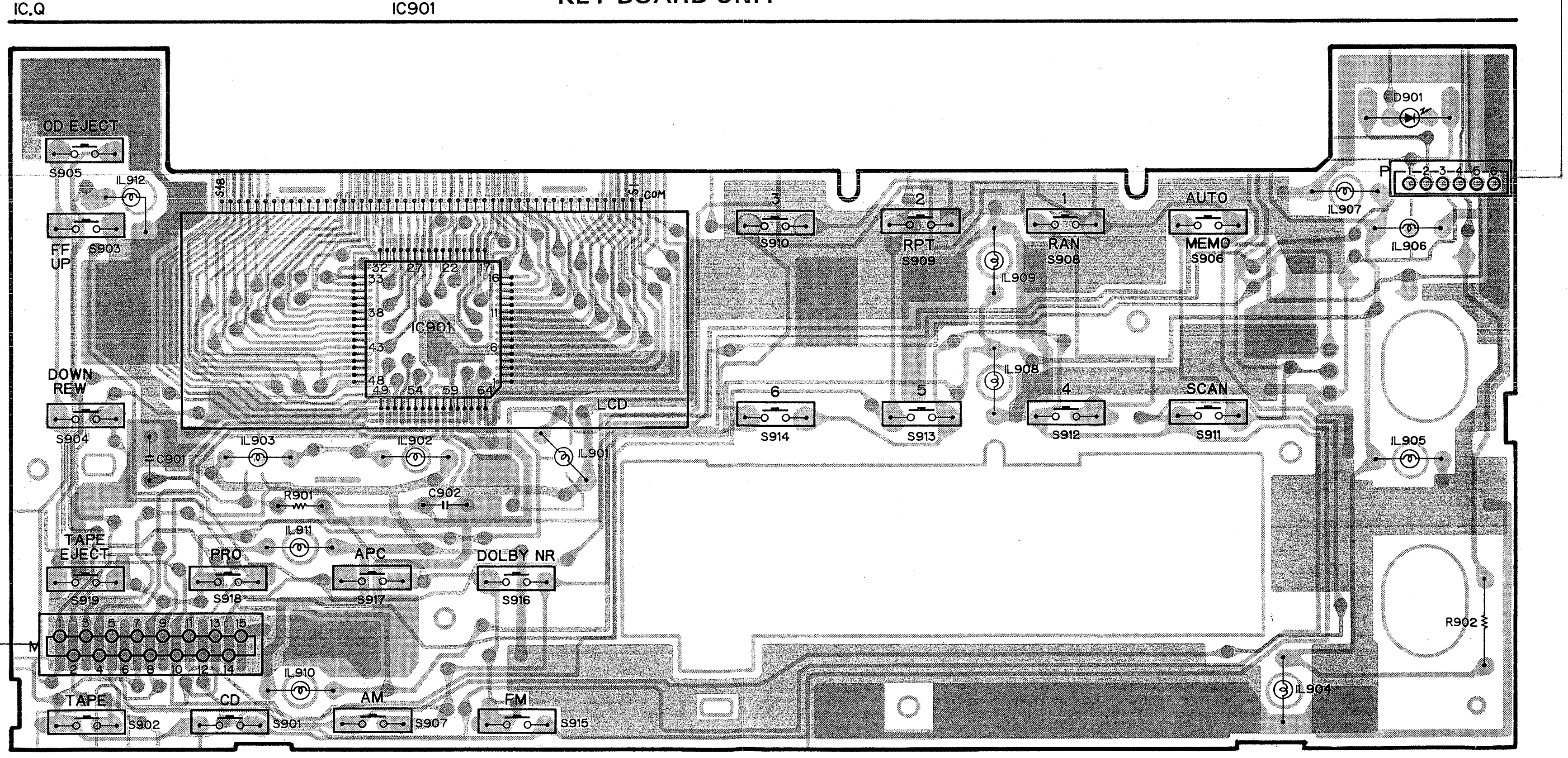

IC, Q
IC202
IC201
Q202 Q201 Q211 Q210 Q207
Q203 Q204 IC205
Q208 Q209 IC206 IC203
Q205
IC204 Q206
CR201
IM
27k
15k
4.7k
BAL
MAIN
TREBLE
BASS
LIGHT
FADER
8.6V
8.7V
4.7V
0V
L201
L202
L203

CONTROL P.C. BOARD TO J

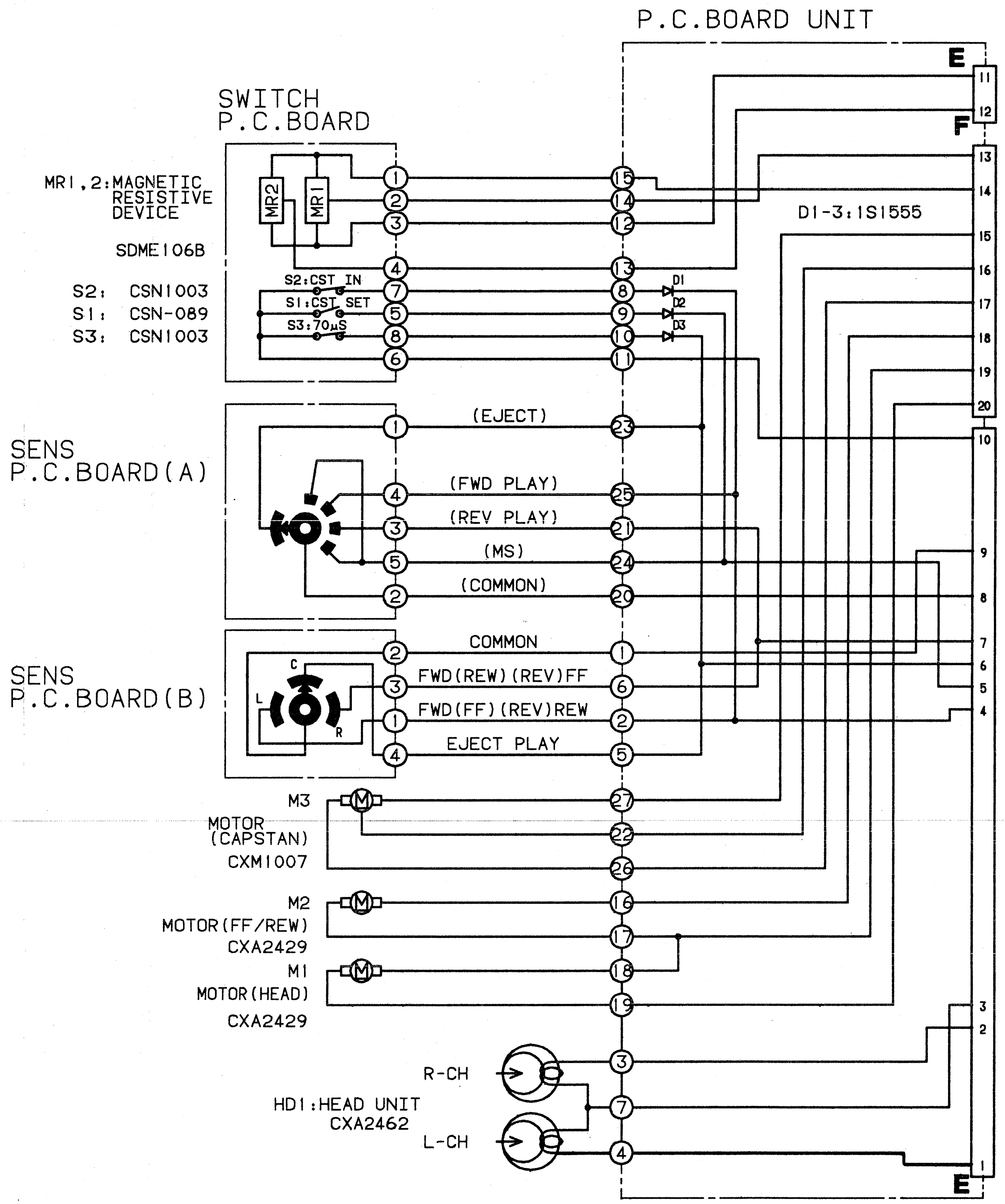
CONNECTOR P.C. BOARD



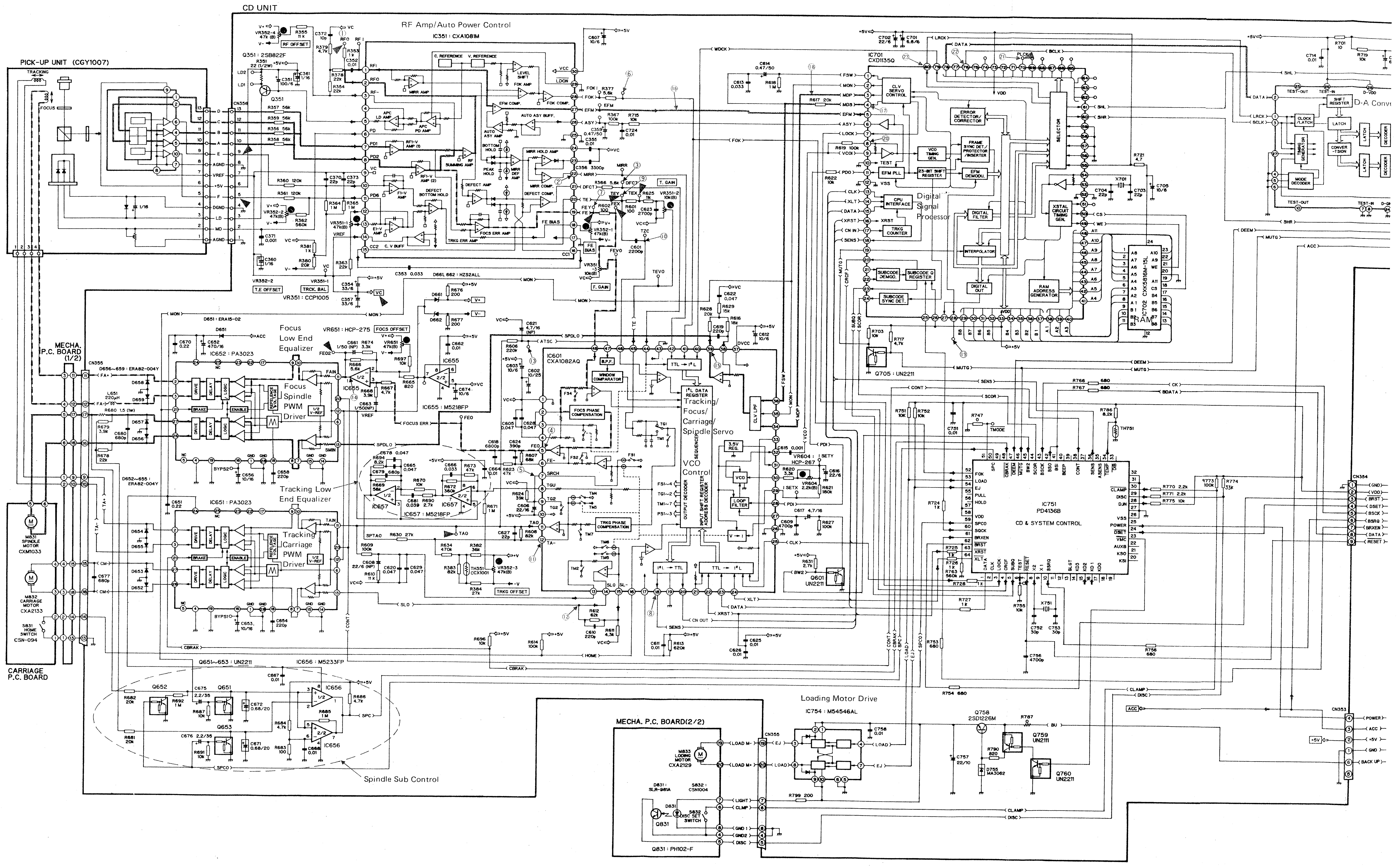
KEY BOARD UNIT


IC,Q
IC901
CD EJECT
S905
IL912
FF UP
S903
DOWN REW
S904
C901
IL903
IL902
R901
C902
IL911
TAPE EJECT
S919
PRO
S918
APC
S917
DOLBY NR
S916
TAPE
S902
CD
S901
IL910
AM
S907
FM
S915
LCD
IL901
3
S910
2
RPT
S909
1
RAN
S908
AUTO
MEMO
S906
IL909
IL908
6
S914
5
S913
4
S912
SCAN
S911
D901
IL907
IL906
IL905
IL904
R902
P

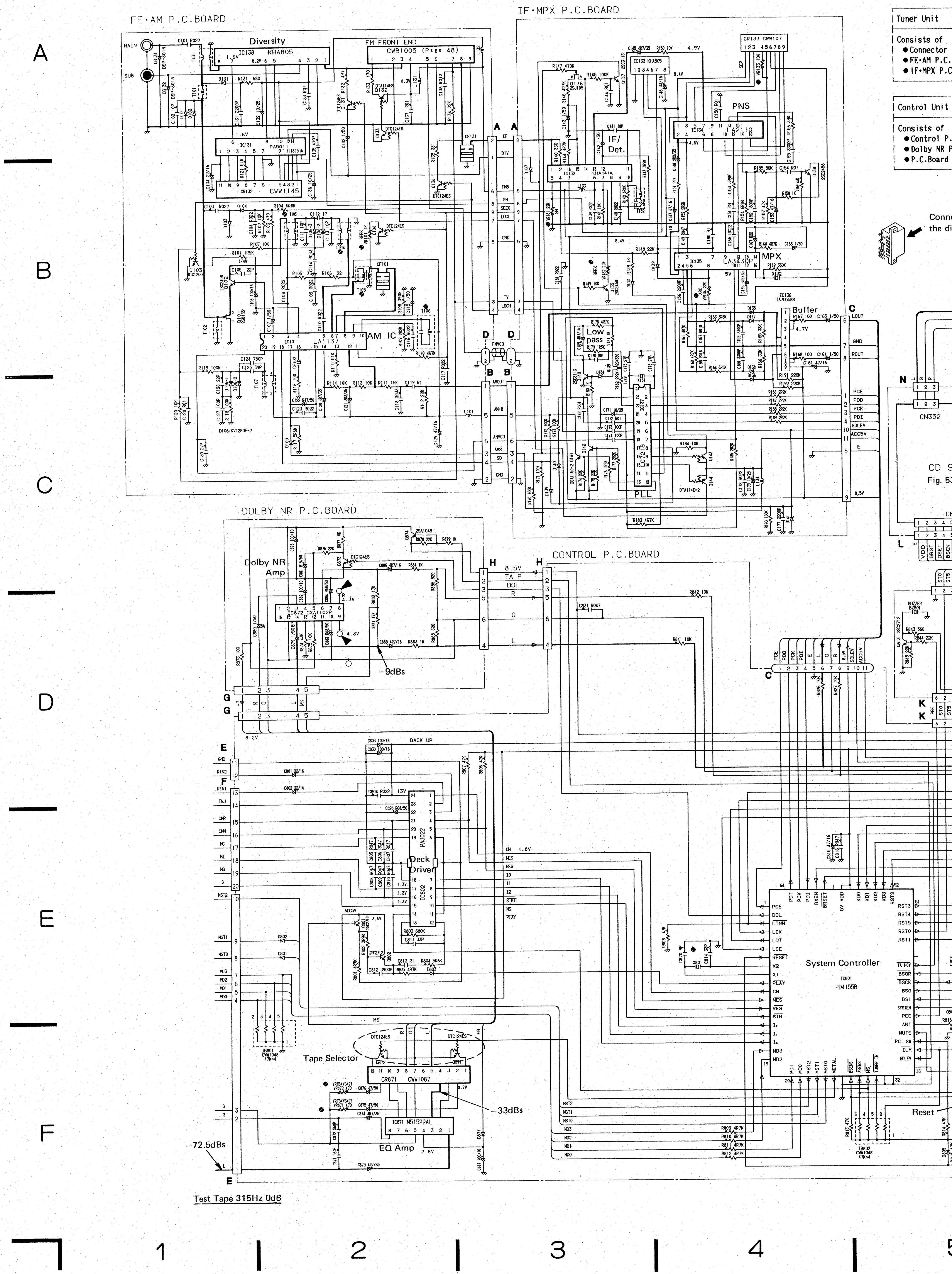
CONTROL P.C. BOARD TO M


P.C.BOARD UNIT
E
F
SWITCH P.C.BOARD
MR1,2:MAGNETIC RESISTIVE DEVICE
SDME106B
S2: CSN1003
S1: CSN-089
S3: CSN1003
MR2
MR1
S2:CST IN
S1:CST SET
S3:70µS
D1
D2
D3
D1-3:1S1555
SENS P.C.BOARD(A)
(EJECT)
(FWD PLAY)
(REV PLAY)
(MS)
(COMMON)
SENS P.C.BOARD(B)
C
L
R
COMMON
FWD(REW)(REV)FF
FWD(FF)(REV)REW
EJECT PLAY
M3
MOTOR (CAPSTAN)
CXM1007
M2
MOTOR(FF/REW)
CXA2429
M1
MOTOR(HEAD)
CXA2429
R-CH
HD1:HEAD UNIT
CXA2462
L-CH
E

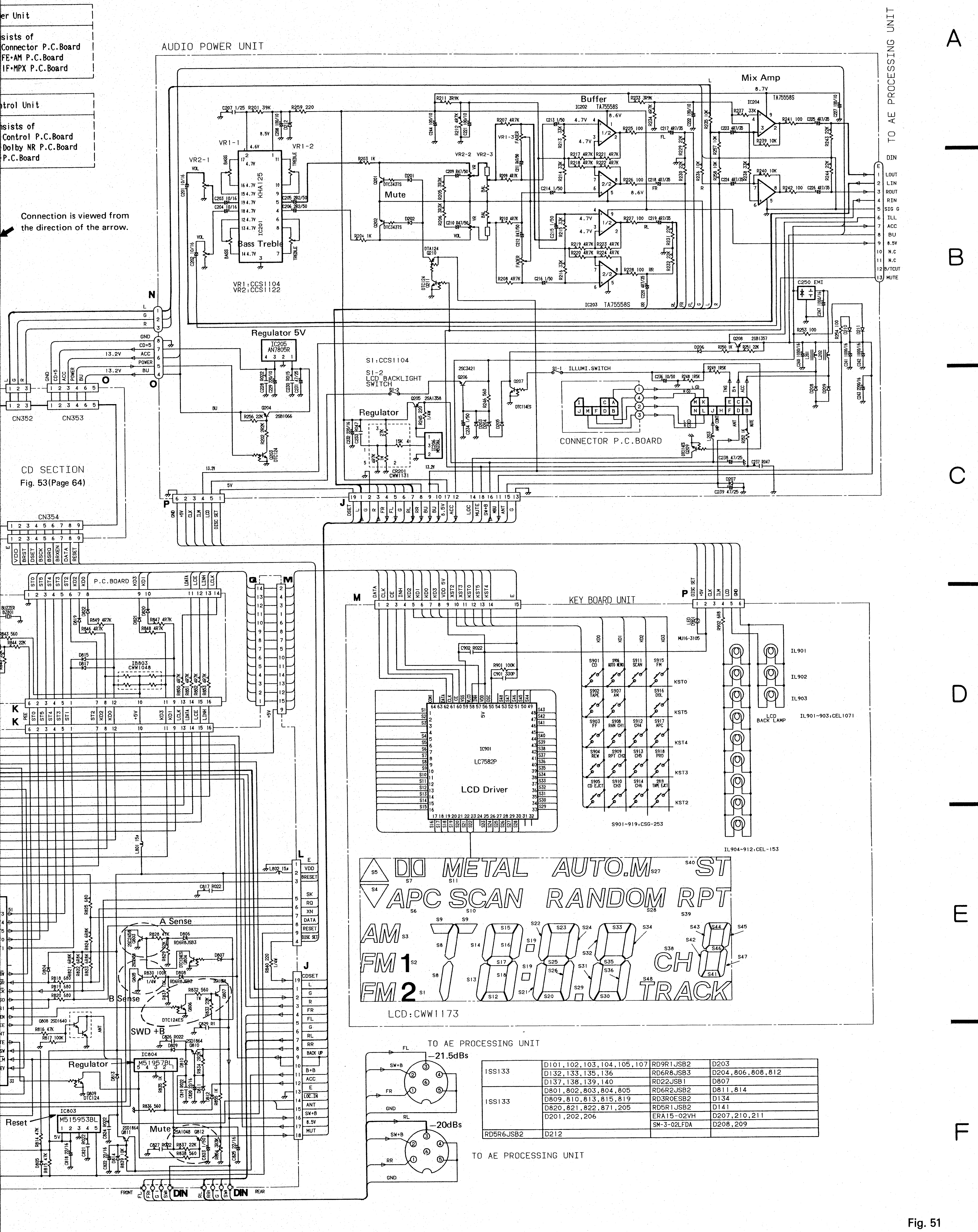
10. SCHEMATIC CIRCUIT DIAGRAM (2)


1
2
3
4
5
6
A
B
C
D
CD UNIT
PICK-UP UNIT (CGY1007)
TRACKING
FOCUS
RF Amp/Auto Power Control
IC351 : CXA1081M
Q351 : 2SB822F
RF OFFSET
C. REFERENCE
V. REFERENCE
LEVEL SHIFT
FOK AMP
FOK COMP.
EFM COMP.
MIRR AMP
APC LD AMP
APC PD AMP
AUTO ASY AMP
AUTO ASY BUFF.
BOTTOM HOLD
PEAK HOLD
MIRR HOLD AMP
MIRR DEF AMP
MIRR COMP.
DEFECT AMP
DEFECT COMP.
RF1-V AMP (1)
RF1-V AMP (2)
RF SUMMING AMP
DEFECT BOTTOM HOLD
E1-V AMP
F1-V AMP
TRKG ERR AMP
FOCS ERR AMP
FE BIAS
C. V BUFF
T.E OFFSET
TRCK. BAL
VR351 : CCP1005
F. GAIN
T. GAIN
MECHA. P.C. BOARD (1/2)
CN355
D656~659 : ERA82-004Y
D652~655 : ERA82-004Y
D651 : ERA15-02
IC652 : PA3023
IC651 : PA3023
DRIVE
DELAY
LOGIC
BRAKE
ENABLE
REFERENCE VOLTAGE
V-REF
Focus Low End Equalizer
VR651 : HCP-275
FOCS OFFSET
Focus Spindle PWM Driver
IC655
IC655 : M5218FP
Tracking Low End Equalizer
IC657 : M5218FP
Tracking /Carriage PWM Driver
TRKG OFFSET
IC601 CXA1082AQ
WINDOW COMPARATOR
B.P.F.
FOCS PHASE COMPENSATION
TRKG PHASE COMPENSATION
I²L DATA REGISTER
Tracking/ Focus/ Carriage/ Spindle Servo
VCO Control
SEQUENCER
OUTPUT DECODER
INPUT SHIFT REGISTER ADDRESS DECODER
TTL → I²L
I²L → TTL
CLV LPF
3.5V REG.
VCO
LOOP FILTER
VR604 : HCP-267
Q601 UN2211
IC701 CXD1135Q
Digital Signal Processor
CLV SERVO CONTROL
ERROR DETECTOR/ CORRECTOR
VCO TIMING GEN.
FRAME SYNC DET/ PROTECTOR /INSERTER
EFM PLL
23-BIT SHIFT REGISTER
EFM DEMODU.
CPU INTERFACE
TRKG COUNTER
DIGITAL FILTER
INTERPOLATOR
DIGITAL OUT
SUBCODE DEMOD.
SUBCODE Q REGISTER
SUBCODE SYNC DET.
RAM ADDRESS GENERATOR
XSTAL CIRCUIT TIMING GEN.
SELECTOR
IC702 CXK5816M-15L
RAM
Q705 : UN2211
D-A Conve
SHIFT REGISTER
CLOCK /LATCH
LATCH
TIMING GENERATOR
CONVER -TSION
MODE DECODER
DECODER
IC751 PD4136B
CD & SYSTEM CONTROL
CN354
CN353
M831 SPINDLE MOTOR CXM1033
M832 CARRIAGE MOTOR CXA2133
S831 HOME SWITCH CSN-094
CARRIAGE P.C. BOARD
Q651~653 : UN2211
IC656 : M5233FP
Spindle Sub Control
MECHA. P.C. BOARD(2/2)
M833 LODING MOTOR CXA2129
D831 : SLR-981A
S832 : CSN1004
S832 DISC SET SWITCH
Q831 : PH102-F
Loading Motor Drive
IC754 : M54546AL
Q758 2SD1226M
Q759 UN2111
Q760 UN2211
D755 MA3062
(GND)
(BRST)
(VDD)
(DSET)
(BSCK)
(BSRQ)
(BRXEN)
(DATA)
(RESET)
(POWER)
(ACC)
(+5V)
(GND)
(BACK UP)

8. SCHEMATIC CIRCUIT DIAGRAM (1)


1
2
3
4
5
A
B
C
D
E
F
FE·AM P.C.BOARD
IF·MPX P.C.BOARD
DOLBY NR P.C.BOARD
CONTROL P.C.BOARD
MAIN
SUB
Diversity
IC138 KHA805
FM FRONT END
CWB1005 (Page 48)
IC131 PA5011
CR132 CWW1145
AM IC
IC101 LA1137
IF/Det.
IC132 KHA141A
IC133 KHA505
CR133 CWW107
PNS
IC134 LA2110
MPX
IC135 LA3430P
IC136 TA7555BS
Buffer
Low pass
PLL
IC137 LC7218
Dolby NR Amp
IC672 CXA1102P
-9dBs
Deck Driver
IC802 PA3022
BACK UP
Tape Selector
CR871 CWW1087
-33dBs
IC871 M51522AL
EQ Amp
-72.5dBs
System Controller
IC801 PD4155B
Reset
Tuner Unit
Consists of
●Connector
●FE·AM P.C.
●IF·MPX P.C
Control Unit
Consists of
●Control P.
●Dolby NR P
●P.C.Board
CD S
Fig. 53
CN352
Conne
the di
BUZZER BZ801
IB801 CWW1048 47K×4
IB802 CWW1048 47K×4

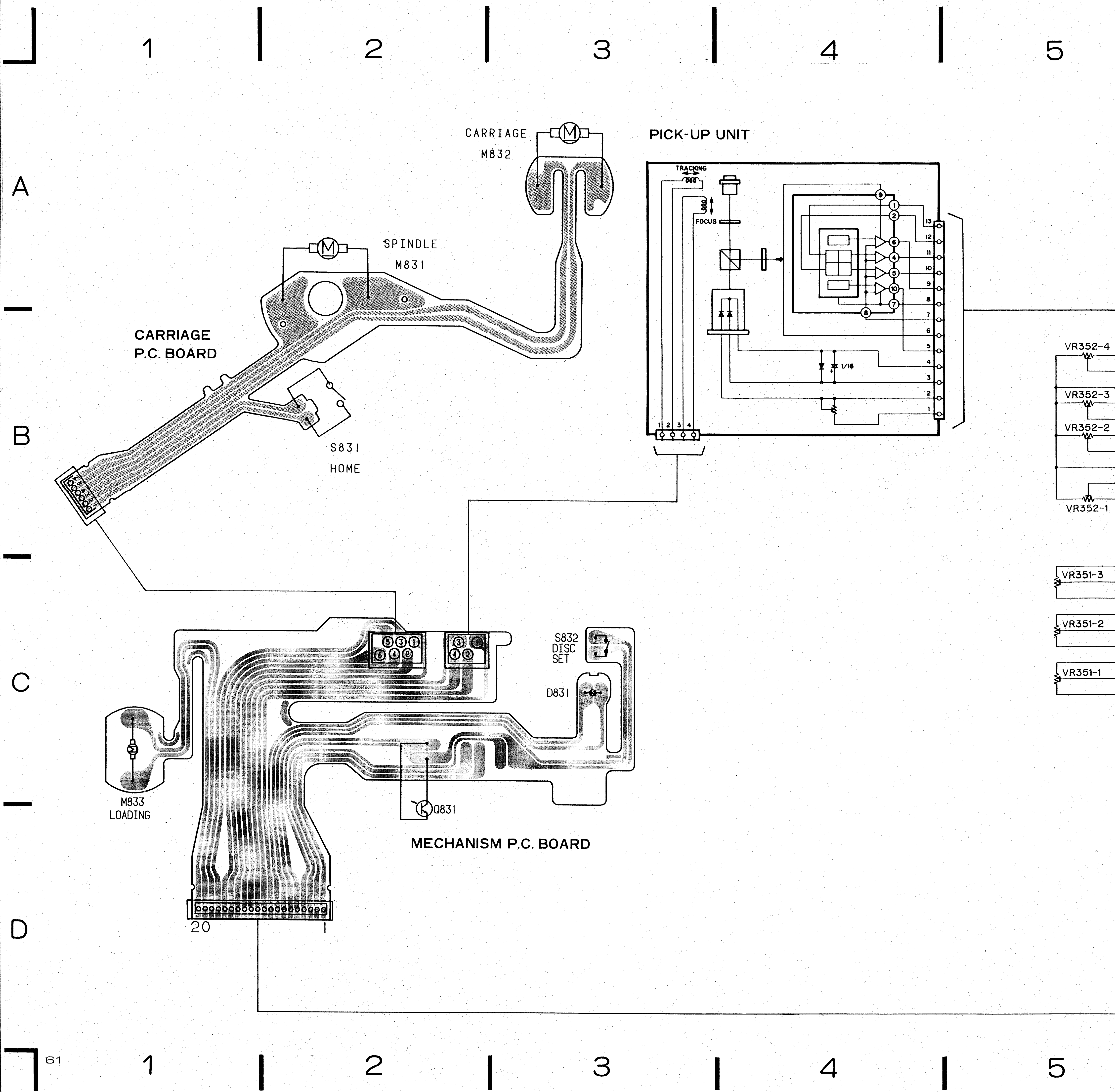
Test Tape 315Hz 0dB


er Unit
sists of
Connector P.C.Board
FE•AM P.C.Board
IF•MPX P.C.Board
trol Unit
sists of
Control P.C.Board
Dolby NR P.C.Board
P.C.Board
Connection is viewed from the direction of the arrow.
AUDIO POWER UNIT
Buffer
IC202 TA75558S
Mix Amp
IC204 TA75558S
IC203 TA75558S
Bass Treble
IC201 KHA125
VR1-1
VR1-2
VR2-1
VR2-2
VR2-3
VR1-3
Mute
VR1:CCS1104
VR2:CCS1122
TO AE PROCESSING UNIT
DIN
LOUT
LIN
ROUT
RIN
SIG G
ILL
ACC
BU
8.5V
N.C
N.C
B/TCUT
MUTE
C250 EMI
Regulator 5V
IC205 AN7805R
S1:CCS1104
S1-2 LCD BACKLIGHT SWITCH
S1-1 ILLUMI.SWITCH
Regulator
CR201 CWW1131
CONNECTOR P.C.BOARD
CN352
CN353
CN354
CD SECTION
Fig. 53(Page 64)
P.C.BOARD
IB803 CWW1048
KEY BOARD UNIT
IC901
LC7582P
LCD Driver
S901~919:CSG-253
IL901
IL902
IL903
LCD BACK LAMP
IL901~903:CEL1071
IL904~912:CEL-153
METAL
AUTO.M
ST
APC SCAN
RANDOM
RPT
AM
FM 1
FM 2
CH
TRACK
LCD:CWW1173
A Sense
B Sense
SWD +B
Regulator
IC804 M51957BL
Reset
IC803 M51953BL
Mute
TO AE PROCESSING UNIT
-21.5dBs
-20dBs
FRONT
REAR
DIN
A
B
C
D
E
F

1SS133	D101,102,103,104,105,107	RD9R1JSB2	D203
	D132,133,135,136	RD6R8JSB3	D204,806,808,812
	D137,138,139,140	RD22JSB1	D807
1SS133	D801,802,803,804,805	RD6R2JSB2	D811,814
	D809,810,813,815,819	RD3R0ESB2	D134
	D820,821,822,871,205	RD5R1JSB2	D141
	D201,202,206	ERA15-02VH	D207,210,211
		SM-3-02LFDA	D208,209
RD5R6JSB2	D212		

Fig. 51

9. CONNECTION DIAGRAM (2)


1
2
3
4
5
A
B
C
D
CARRIAGE
M832
PICK-UP UNIT
TRACKING
FOCUS
1/16
SPINDLE
M831
CARRIAGE
P.C. BOARD
S831
HOME
VR352-4
VR352-3
VR352-2
VR352-1
VR351-3
VR351-2
VR351-1
S832
DISC
SET
D831
M833
LOADING
Q831
MECHANISM P.C. BOARD
20
1

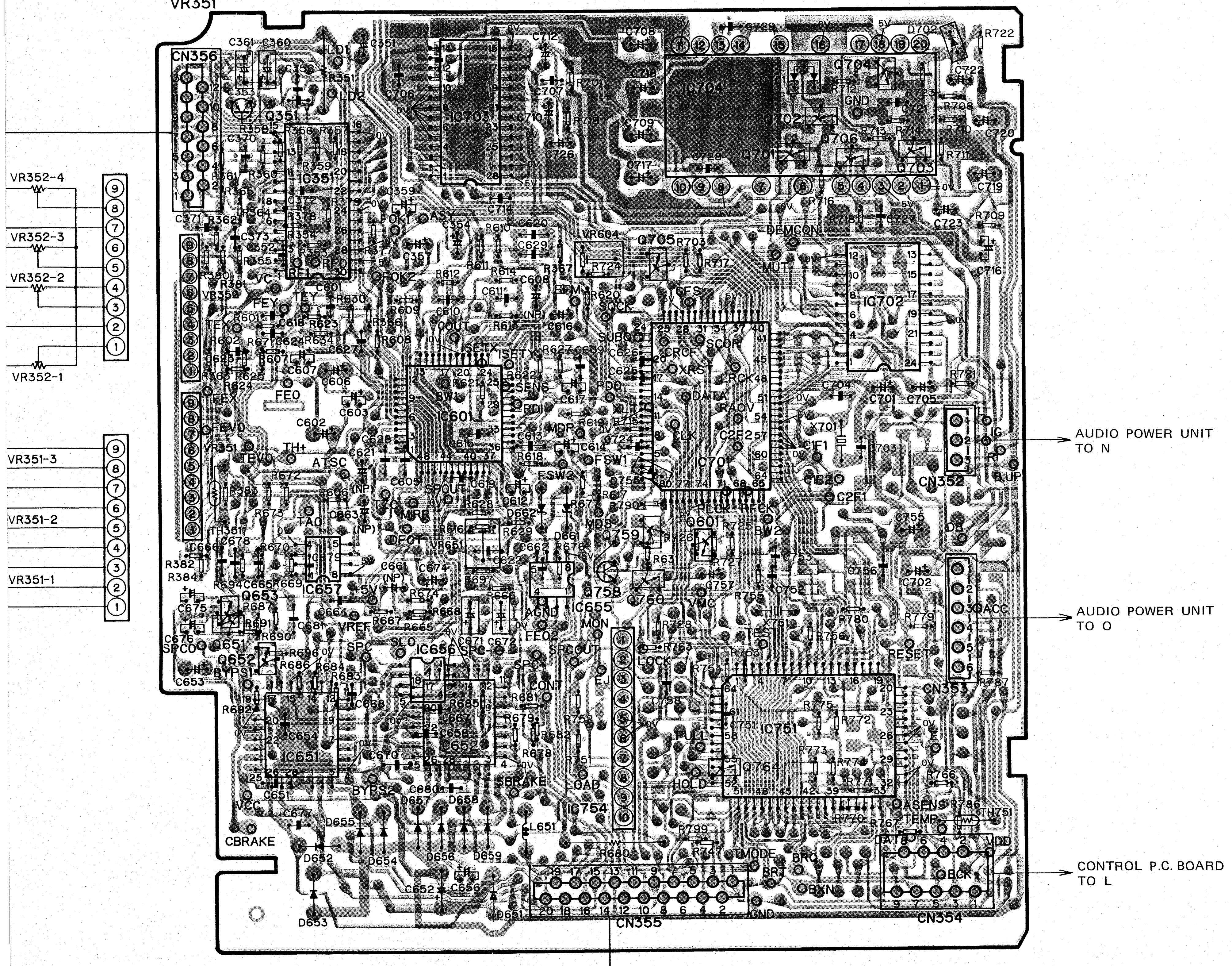
6 7 8 9

CD UNIT

IC,Q	Q653 Q651	Q351 Q652	IC351 IC657 IC651	IC601 IC656	IC703 IC652	IC655	Q758 IC754	Q705 Q759 Q760	IC701 Q601 Q764	IC704 Q701 IC751	Q702	Q706 IC702	Q704 Q703
ADJ	VR352 VR351				VR651		VR604						

A

B



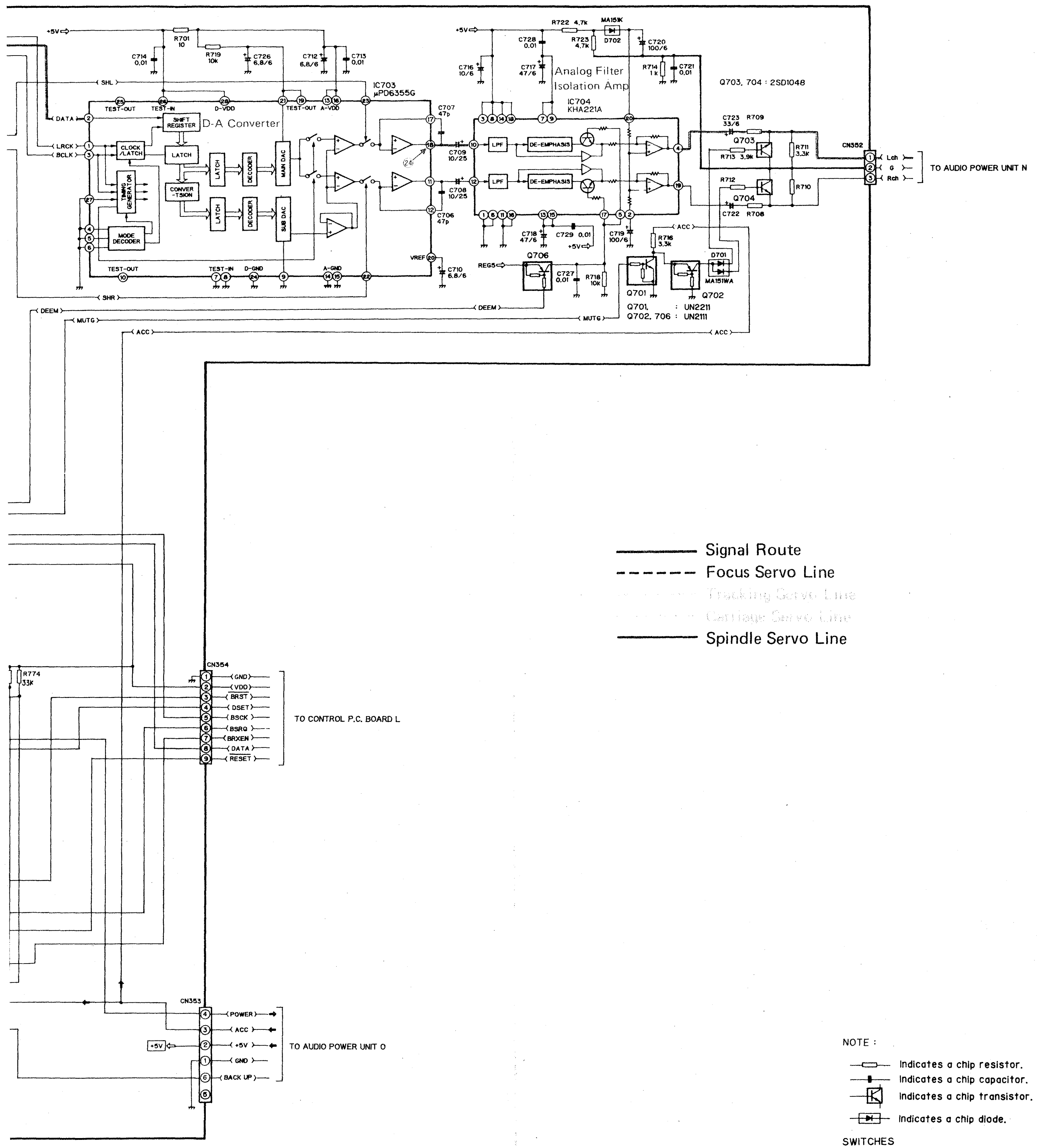
CN356
IC351
Q351
IC703
IC704
Q704
Q702
Q706
Q701
Q703
D702
IC702
Q705
VR604
IC601
IC701
X701
CN352
Q601
Q759
Q758
Q760
IC655
IC657
Q653
Q651
Q652
IC656
IC652
IC651
IC754
IC751
IC764
CN353
CN355
CN354
VR352-4
VR352-3
VR352-2
VR352-1
VR351-3
VR351-2
VR351-1
VR352
VR351
VR651
CBRAKE
GND
AUDIO POWER UNIT
TO N
AUDIO POWER UNIT
TO O
CONTROL P.C. BOARD
TO L

C

D

Fig. 52

6 7 8 9


+5V
R701 10
C714 0.01
R719 10k
C726 6.8/6
C712 6.8/6
C713 0.01
SHL
DATA
LRCK
BCLK
TEST-OUT
TEST-IN
SHIFT REGISTER
D-A Converter
D-VDD
TEST-OUT A-VDD
IC703 µPD6355G
CLOCK /LATCH
LATCH
TIMING GENERATOR
CONVER-TSION
DECODER
MAIN DAC
SUB DAC
MODE DECODER
A-GND
D-GND
VREF
C707 47p
C709 10/25
C708 10/25
C706 47p
C710 6.8/6
C716 10/6
C728 0.01
C717 47/6
R722 4.7k
R723 4.7k
MA151K
D702
C720 100/6
R714 1k
C721 0.01
Analog Filter
Isolation Amp
IC704 KHA221A
LPF
DE-EMPHASIS
Q703, 704 : 2SD1048
C723 33/6
R709
Q703
R713 3.9k
R711 3.3k
R712
R710
Q704
C722
R708
CN352
Lch
G
Rch
TO AUDIO POWER UNIT N
C718 47/6
C729 0.01
C719 100/6
R716 3.3k
ACC
REG5
Q706
C727 0.01
R718 10k
Q701
D701
MA151WA
Q702
Q701 : UN2211
Q702, 706 : UN2111
DEEM
MUTG
ACC
SHR
R774 33k
CN354
GND
VDD
BRST
DSET
BSCK
BSRQ
BRXEN
DATA
RESET
TO CONTROL P.C. BOARD L
CN353
POWER
ACC
+5V
GND
BACK UP
TO AUDIO POWER UNIT O
Signal Route
Focus Servo Line
Tracking Servo Line
Carriage Servo Line
Spindle Servo Line

NOTE :

—▭— Indicates a chip resistor.
Indicates a chip capacitor.
Indicates a chip transistor.
Indicates a chip diode.

SWITCHES

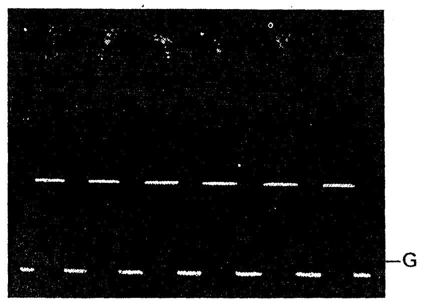
S831 : HOME SWITCH ············· ON —— OFF
S832 : DISC SET SWITCH········· ON —— OFF
The underlined indicates the switch position.

Fig. 53

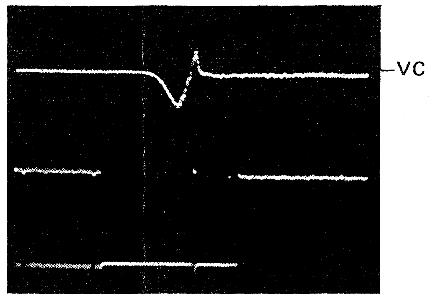
• Wave Forms

Note: 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage.
G: GND VC: Pin 14 of CXA1081M (2.5V)

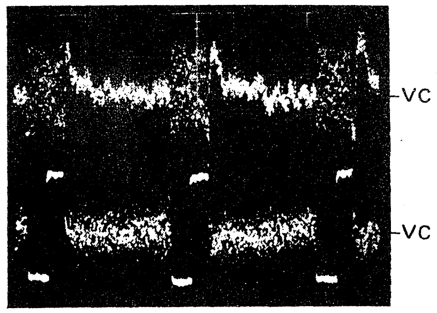
① CH1: RFO 0.4V/div. 0.4ms/div.
② CH2: MIRR 2V/div.
Test mode: Tracking open



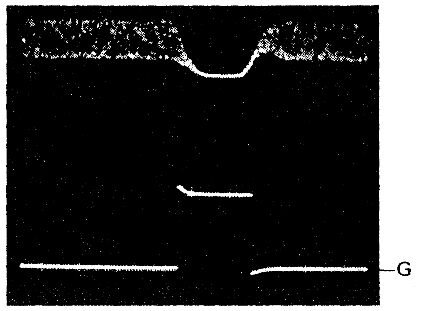
⑦ CH1: FEY 1V/div. 4ms/div.
⑧ CH2: SENS 2V/div.
Normal mode: Focus close (The lens moves DOWN → UP)



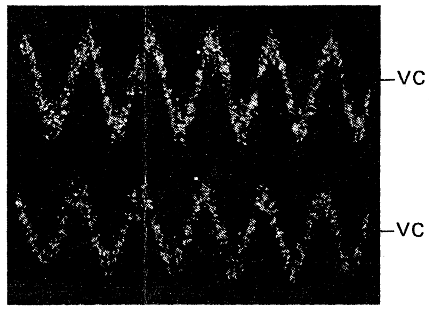
⑨ CH1: TEY 0.4V/div. 4ms/div.
⑪ CH2: TAO 0.4V/div.
Normal mode: Track search (80 track jump)



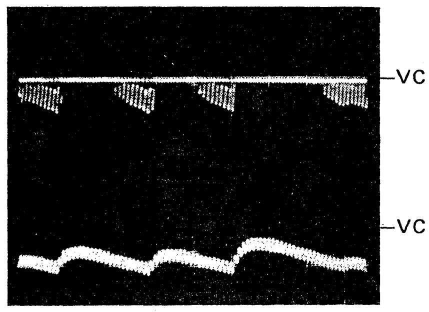
① CH1: RFO 1V/div. 0.4ms/div.
③ CH2: DEFECT 2V/div.
Normal mode: The defect part passes 800µm.



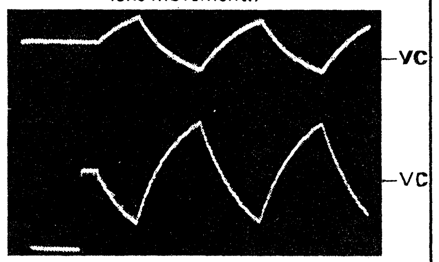
⑨ CH1: TEY 0.4V/div. 0.4ms/div.
⑩ CH2: TZC 0.4V/div.
Test mode: Tracking open



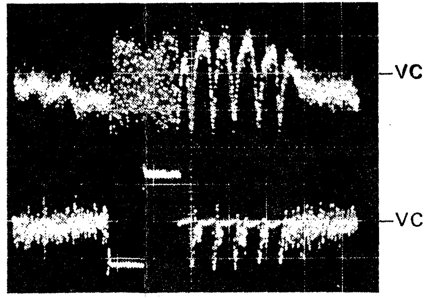
⑫ CH1: SLO 0.4V/div. 2S/div.
⑬ CH2: ATSC 0.02V/div.
Normal mode: PLAY



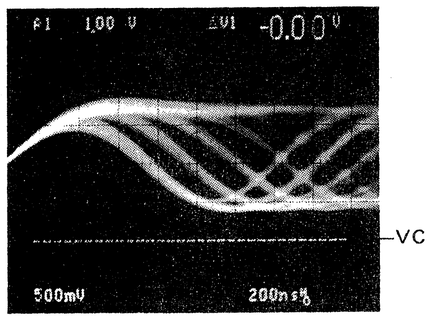
④ CH1: FEO 0.2V/div. 0.4S/div.
⑤ CH2: Pin 7 of CXA1082AQ 0.04V/div.
Test mode: Connect the FOK2 to GND. Focus search is performed. (CH2 is the same phase as the lens movement.)



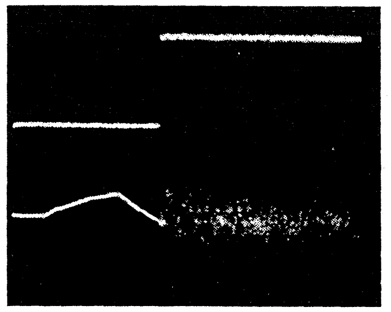
⑨ CH1: TEY 0.4V/div. 2ms/div.
⑪ CH2: TAO 0.4V/div.
Normal mode: Brake wave form when track search is performed.



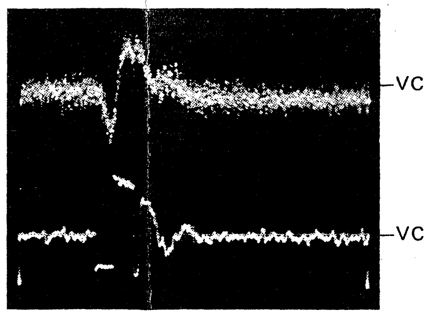
① RFO 0.5V/div. 200ns/div.
Normal mode: PLAY



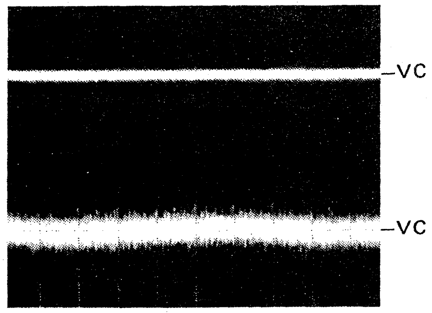
⑥ CH1: FOK2 2V/div. 0.2S/div.
④ CH2: FEO 0.2V/div.
Normal mode: Focus close



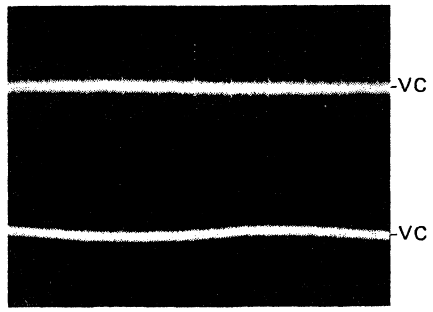
⑨ CH1: TEY 0.4V/div. 0.4ms/div.
⑪ CH2: TAO 0.4V/div.
Test mode: Single jump



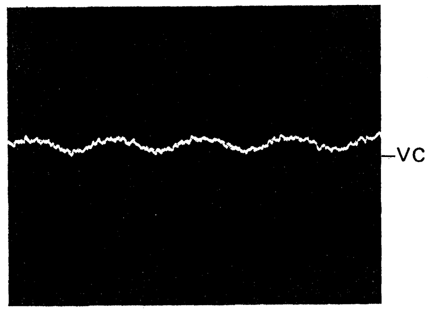
⑦ CH1: FEY 0.5V/div. 20ms/div.
⑭ CH2: FEO2 0.5V/div.
Normal mode: PLAY



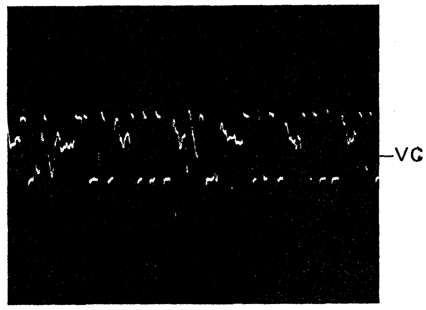
⑨ CH1: TEY 0.5V/div.
20ms/div.
⑪ CH2: TAO 0.5V/div.
Normal mode: PLAY



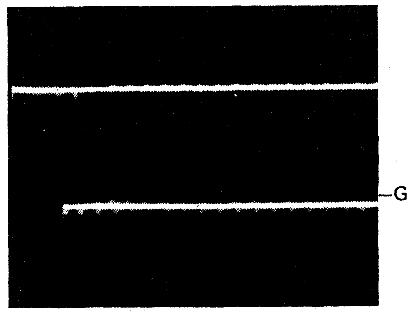
⑮ SPDLO 2V/div.
50ms/div.
PLAY



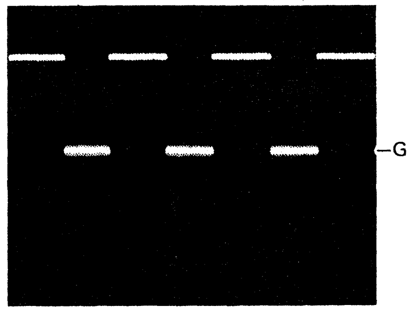
⑮ SPDLO 2V/div.
50ms/div.
SEARCH



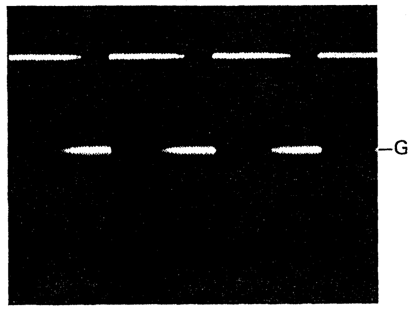
⑯ EFM 2V/div.
0.5μs/div.
PLAY



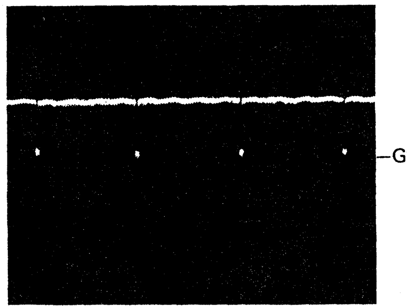
⑰ MDS 2V/div.
50μs/div.
PLAY



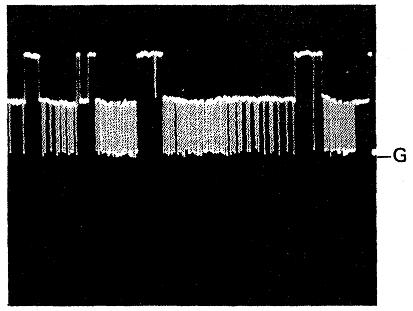
⑰ MDS 2V/div.
50μs/div.
SEARCH



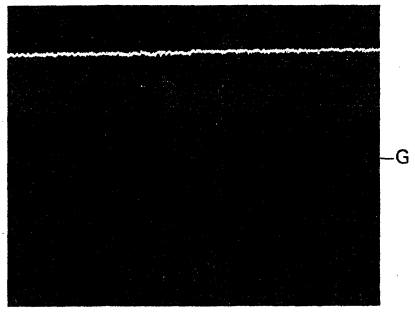
⑱ MDP 2V/div.
200μs/div.
PLAY



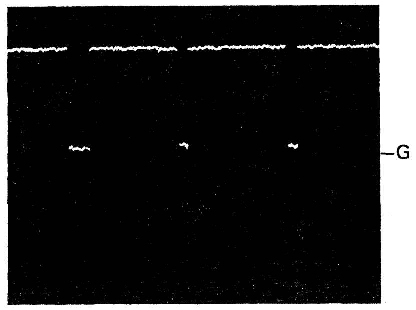
⑱ MDP 2V/div.
10ms/div.
SEARCH



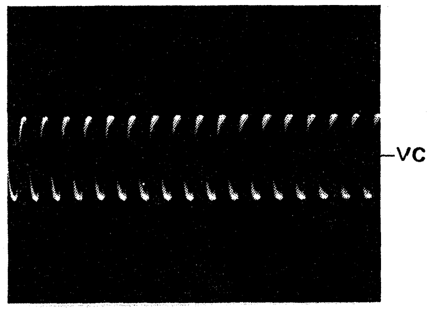
⑲ GFS 2V/div.
200μs/div.
PLAY



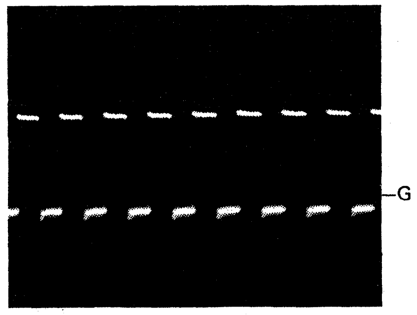
⑲ GFS 2V/div.
20ms/div.
SEARCH



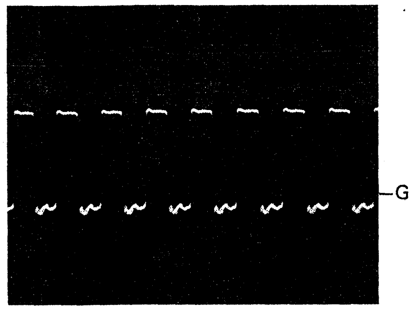
⑳ VCOO 2V/div.
0.2μs/div.
PLAY



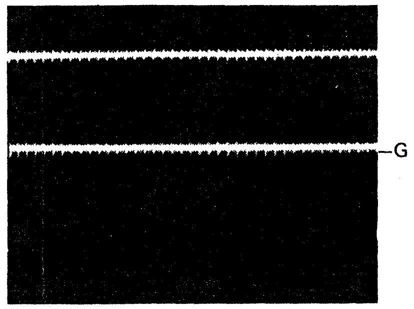
㉑ PLCK 2V/div.
0.2μs/div.
PLAY



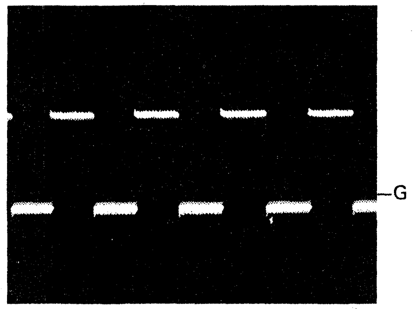
㉒ BCLK 2V/div.
0.2μs/div.



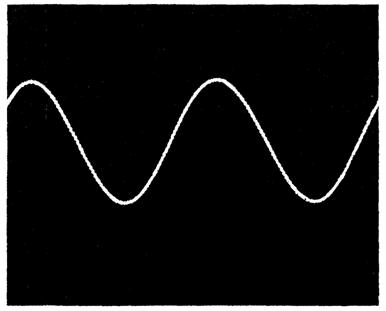
㉖ DATA 2V/div.
0.2μs/div.



㉓ LRCK 2V/div.
5μs/div.
PLAY



㉔ L or R OUT 0.5V/div.
0.2ms/div.
PLAY (1kHz: FS)



11. SCH

- AE
- DE

A

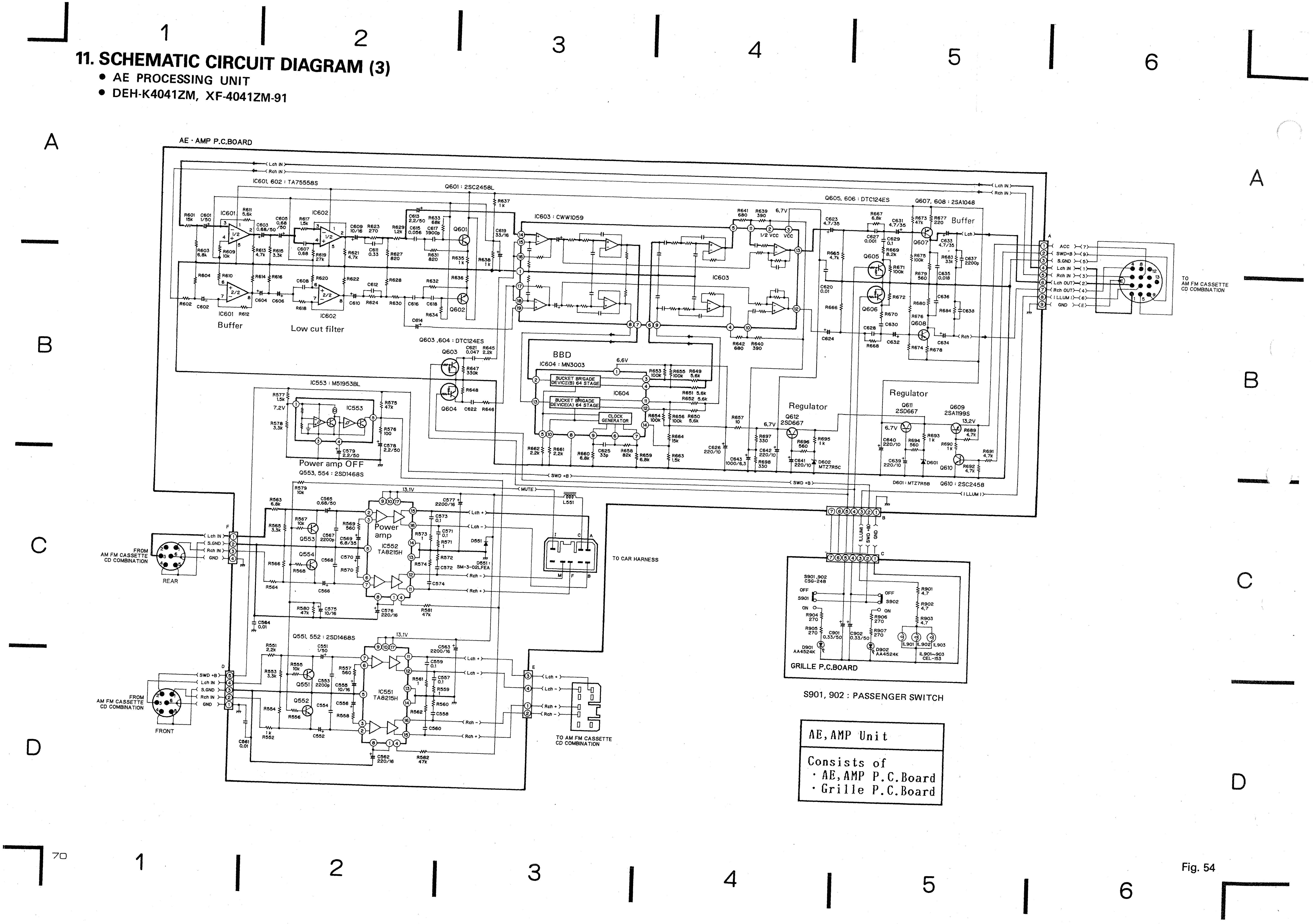
B

C

D

11. SCHEMATIC CIRCUIT DIAGRAM (3)

- AE PROCESSING UNIT
- DEH-K4041ZM, XF-4041ZM-91


1
2
3
4
5
6
A
B
C
D
AE · AMP P.C.BOARD
IC601, 602 : TA75558S
Q601 : 2SC2458L
IC603 : CW1059
Q605, 606 : DTC124ES
Q607, 608 : 2SA1048
Buffer
Low cut filter
IC601
IC602
Q601
Q602
IC603
Q603, 604 : DTC124ES
Q603
Q604
BBD
IC604 : MN3003
BUCKET BRIGADE DEVICE(B) 64 STAGE
BUCKET BRIGADE DEVICE(A) 64 STAGE
CLOCK GENERATOR
IC604
IC553 : M51953BL
IC553
Power amp OFF
Q553, 554 : 2SD1468S
Power amp
IC552 TA8215H
Q551, 552 : 2SD1468S
IC551 TA8215H
Regulator
Q611 2SD667
Q609 2SA1199S
Q612 2SD667
Q610
D601 : MTZ7R5B
Q610 : 2SC2458
D602 MTZ7R5C
D551 : SM-3-02LFEA
L551
ACC
SWD+B
S.GND
Lch IN
Rch IN
Lch OUT
Rch OUT
ILLUM
GND
TO AM FM CASSETTE CD COMBINATION
FROM AM FM CASSETTE CD COMBINATION
REAR
FRONT
TO CAR HARNESS
TO AM FM CASSETTE CD COMBINATION
MUTE
SWD +B
ILLUM
GRILLE P.C.BOARD
S901, 902 CSG-248
S901
S902
OFF
ON
D901 AA4524K
D902 AA4524K
IL901–903 CEL-153
S901, 902 : PASSENGER SWITCH

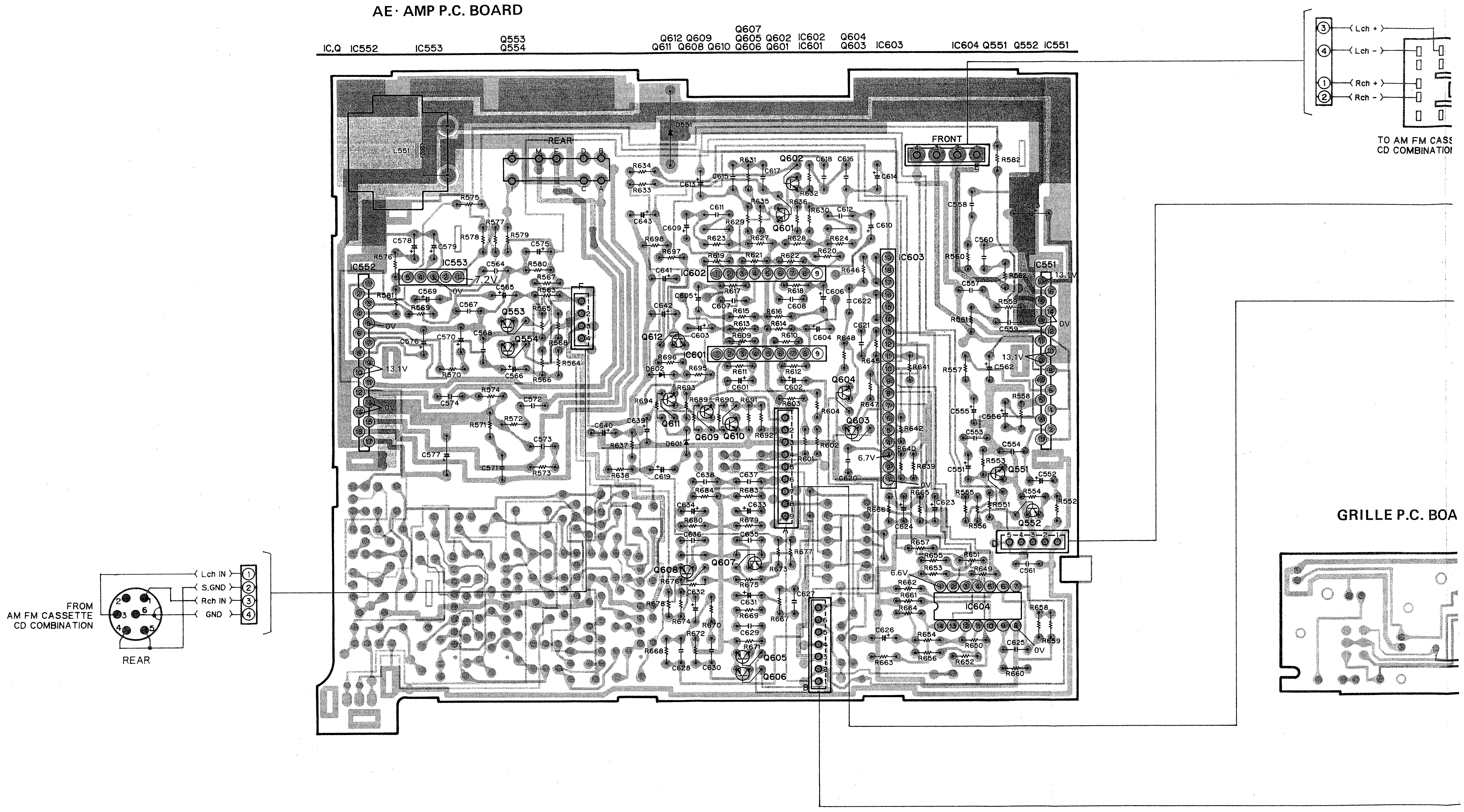
AE,AMP Unit

Consists of
· AE,AMP P.C.Board
· Grille P.C.Board

Fig. 54

12. CONNECTION DIAGRAM (3)

- AE PROCESSING UNIT
- DEH-K4041ZM, XF-4041ZM-91


A
B
C
D
AE · AMP P.C. BOARD
IC,Q IC552 IC553 Q553 Q554 Q612 Q611 Q609 Q608 Q610 Q607 Q605 Q606 Q602 Q601 IC602 IC601 Q604 Q603 IC603 IC604 Q551 Q552 IC551
REAR
FRONT
L551
D551
IC552
IC553
IC601
IC602
IC603
IC604
IC551
Q551
Q552
Q553
Q554
Q601
Q602
Q603
Q604
Q605
Q606
Q607
Q608
Q609
Q610
Q611
Q612
D601
D602
7.2V
13.1V
0V
6.7V
6.6V
Lch IN
S.GND
Rch IN
GND
FROM
AM FM CASSETTE
CD COMBINATION
REAR
Lch +
Lch −
Rch +
Rch −
TO AM FM CASS
CD COMBINATIO
GRILLE P.C. BOA

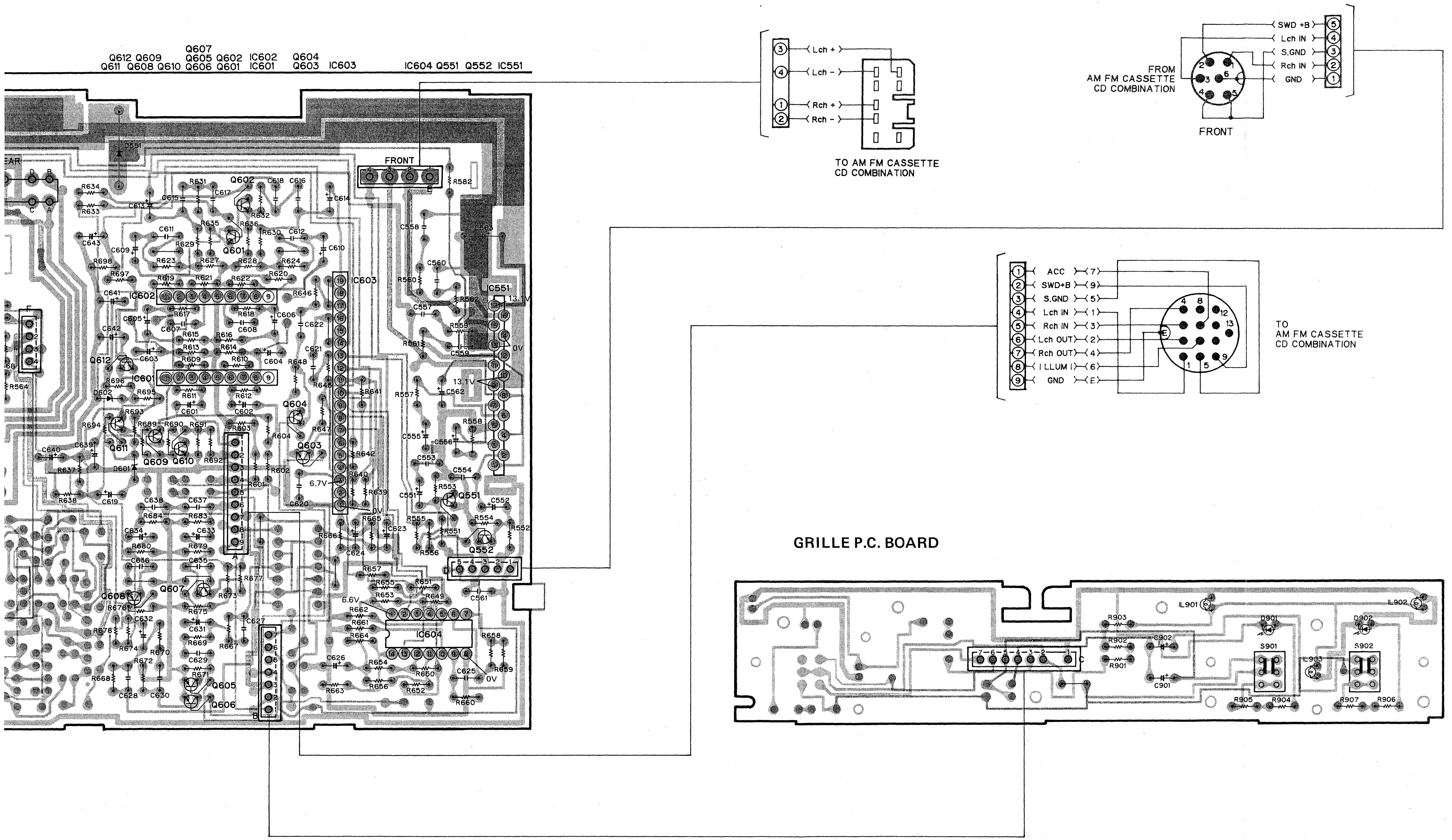
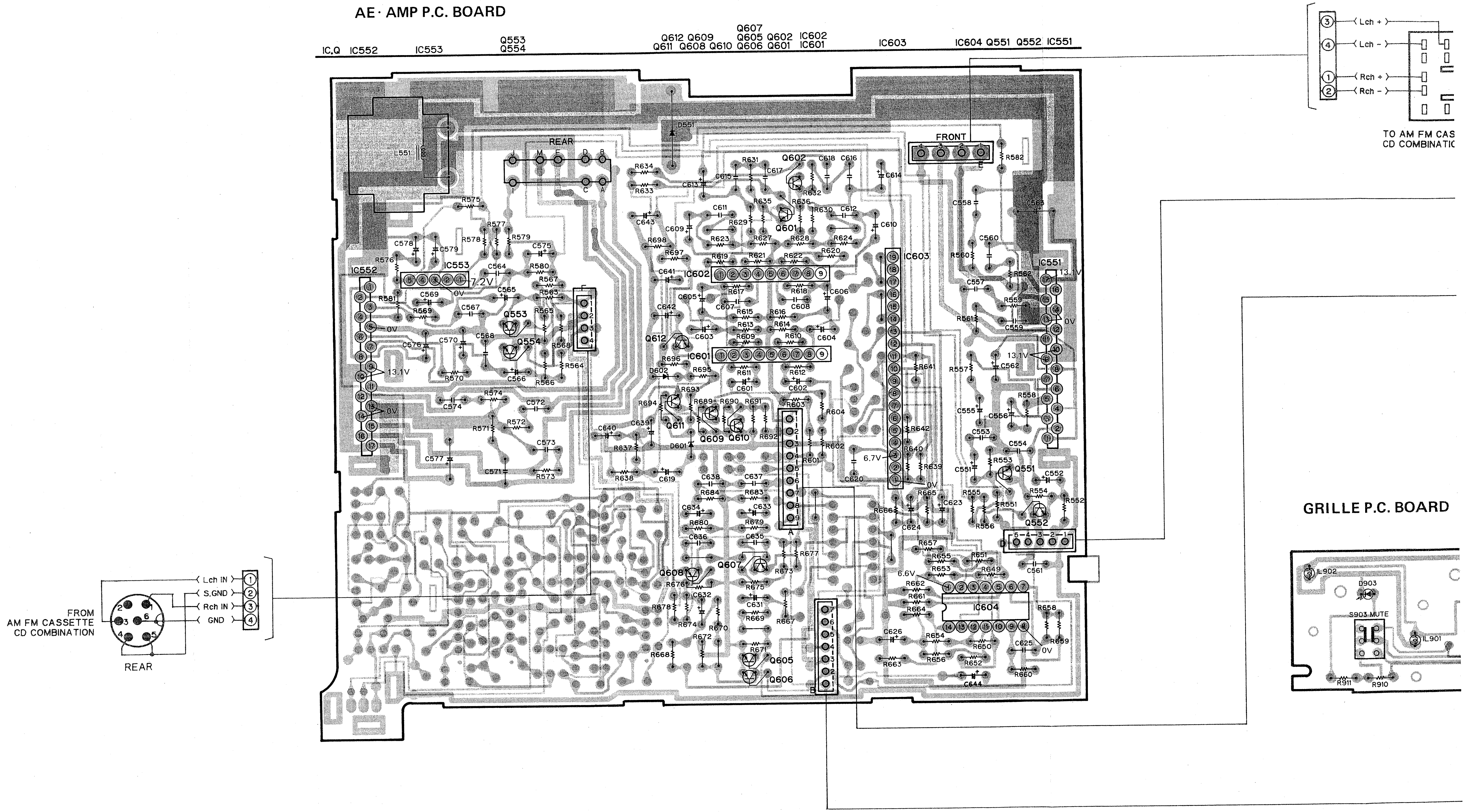
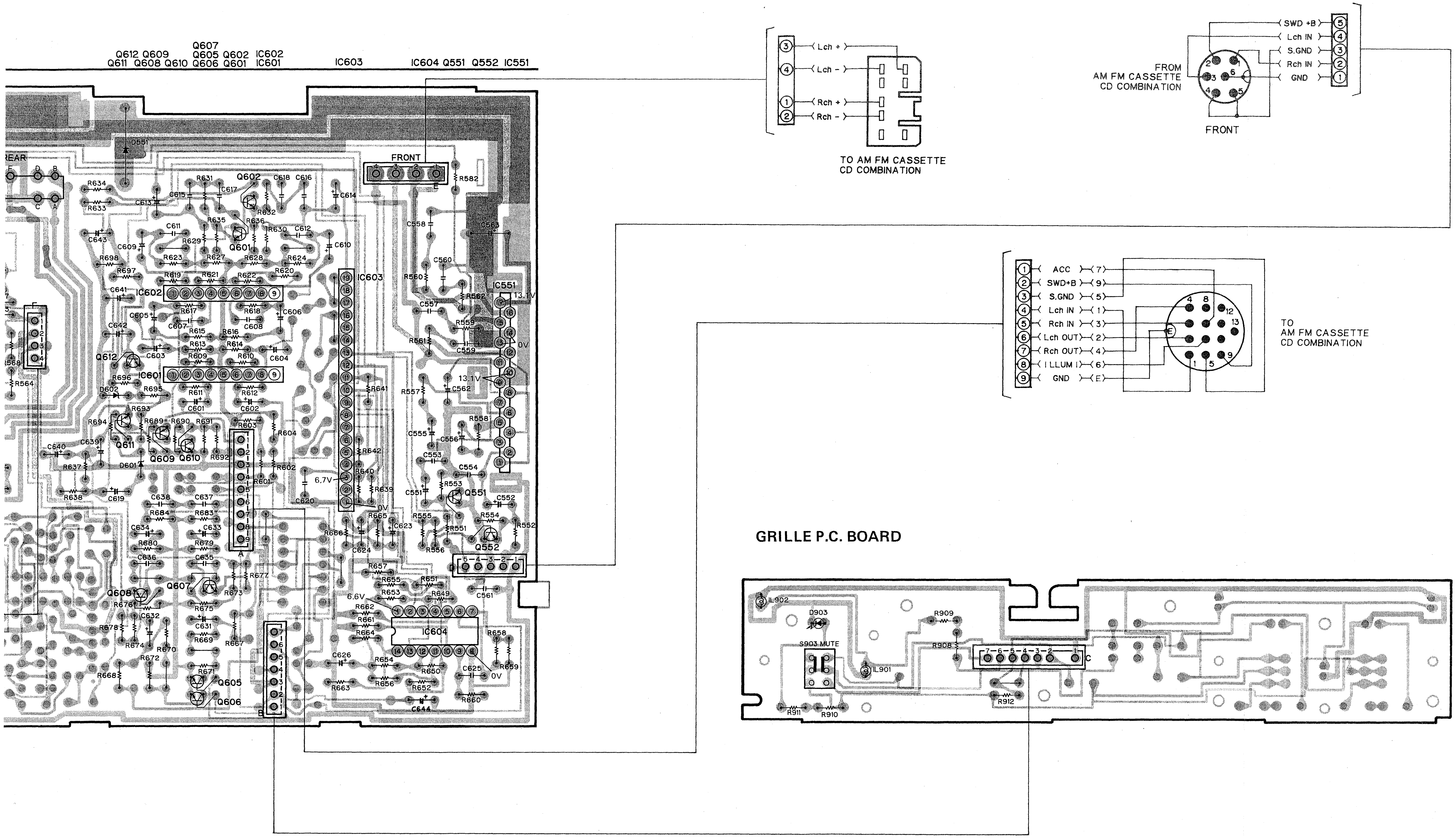

Q612 Q609
Q611 Q608 Q610
Q607
Q605 Q606
Q602 Q601
IC602 IC601
Q604 Q603
IC603
IC604 Q551 Q552 IC551
FRONT
Q602
Q601
IC602
IC601
IC603
IC551
IC604
Q604
Q603
Q612
Q611
Q609
Q610
Q608
Q607
Q605
Q606
Q551
Q552
13.1V
0V
6.7V
6.6V
③ Lch +
④ Lch −
① Rch +
② Rch −
TO AM FM CASSETTE
CD COMBINATION
⑤ SWD +B
④ Lch IN
③ S.GND
② Rch IN
① GND
FROM
AM FM CASSETTE
CD COMBINATION
FRONT
① ACC ⑦
② SWD+B ⑨
③ S.GND ⑤
④ Lch IN ①
⑤ Rch IN ③
⑥ Lch OUT ②
⑦ Rch OUT ④
⑧ ILLUMI ⑥
⑨ GND Ⓔ
TO
AM FM CASSETTE
CD COMBINATION
GRILLE P.C. BOARD
IL901
IL902
IL903
D901
D902
S901
S902
R901
R902
R903
R904
R905
R906
R907
C901
C902

Fig. 55

13. CONNECTION DIAGRAM (4)

- AE PROCESSING UNIT
- DEH-K4141ZM, XF-4141ZM-91


AE · AMP P.C. BOARD
IC,Q IC552 IC553 Q553 Q554 Q612 Q609 Q611 Q608 Q610 Q607 Q605 Q606 Q602 Q601 IC602 IC601 IC603 IC604 Q551 Q552 IC551
REAR
FRONT
7.2V
0V
13.1V
6.7V
6.6V
GRILLE P.C. BOARD
IL902
D903
S903 MUTE
IL901
R911 R910
Lch +
Lch −
Rch +
Rch −
TO AM FM CAS
CD COMBINATIC
FROM
AM FM CASSETTE
CD COMBINATION
Lch IN
S.GND
Rch IN
GND
REAR

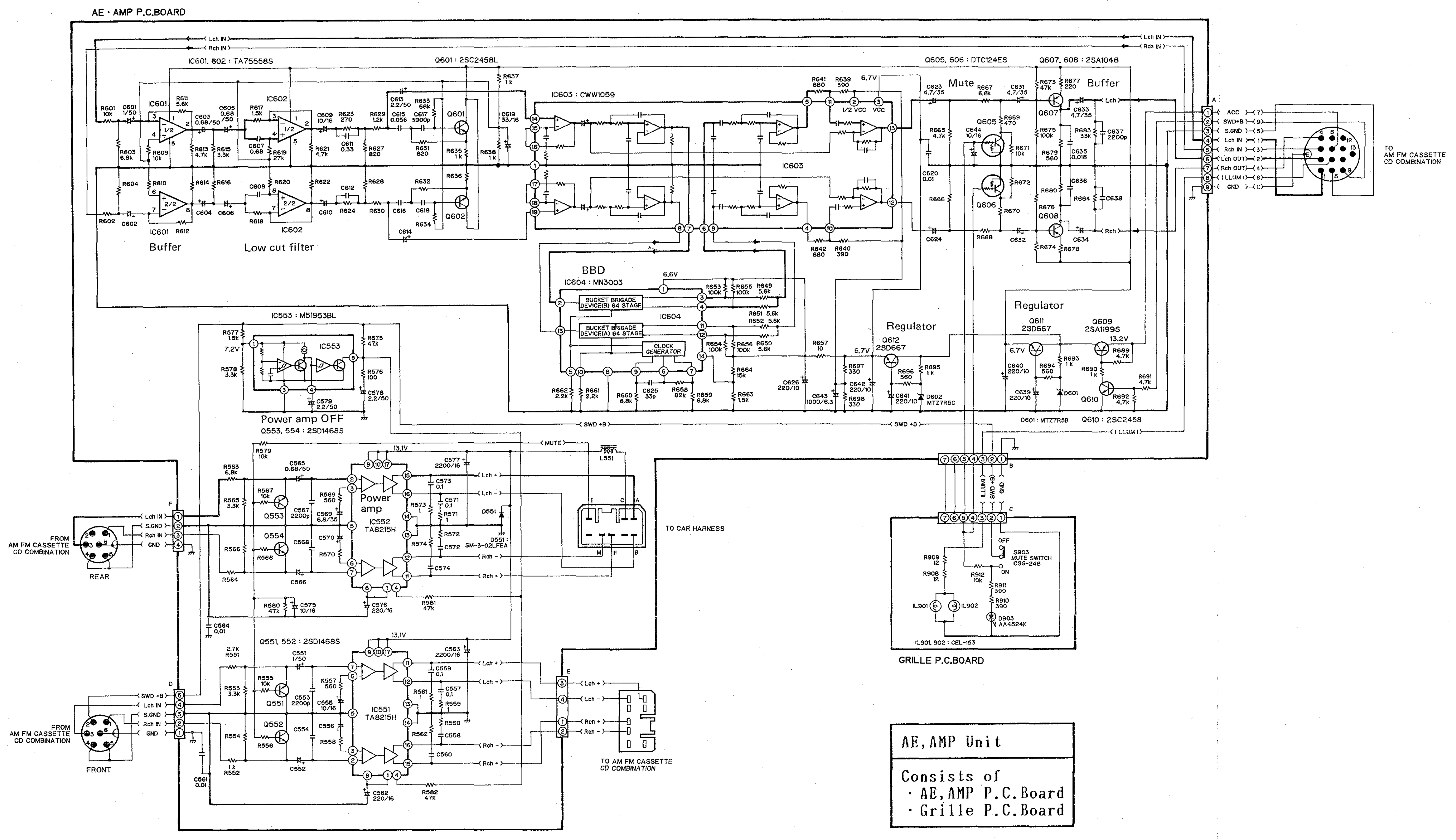

Q612 Q609
Q611 Q608 Q610
Q607
Q605 Q602 IC602
Q606 Q601 IC601
IC603
IC604 Q551 Q552 IC551
REAR
FRONT
IC602
IC601
IC603
IC551
IC604
13.1V
0V
6.7V
6.6V
Lch +
Lch −
Rch +
Rch −
TO AM FM CASSETTE
CD COMBINATION
SWD +B
Lch IN
S.GND
Rch IN
GND
FROM
AM FM CASSETTE
CD COMBINATION
FRONT
ACC
SWD+B
S.GND
Lch IN
Rch IN
Lch OUT
Rch OUT
ILLUM
GND
TO
AM FM CASSETTE
CD COMBINATION
GRILLE P.C. BOARD
D903
S903 MUTE
IL901
IL902
R908
R909
R910
R911
R912

A
B
C
D

Fig. 56

14. SCHEMATIC CIRCUIT DIAGRAM (4)

- AE PROCESSING UNIT
- DEH-K4141ZM, XF-4141ZM-91


AE · AMP P.C.BOARD
IC601, 602 : TA75558S
Q601 : 2SC2458L
IC603 : CWW1059
Q605, 606 : DTC124ES
Q607, 608 : 2SA1048
Mute
Buffer
IC601
IC602
Q601
Q602
IC603
Buffer
Low cut filter
BBD
IC604 : MN3003
BUCKET BRIGADE DEVICE(B) 64 STAGE
BUCKET BRIGADE DEVICE(A) 64 STAGE
CLOCK GENERATOR
IC604
6.6V
6.7V
1/2 VCC
VCC
Regulator
Q612 2SD667
Q611 2SD667
Q609 2SA1199S
Q610
13.2V
D601 : MTZ7R5B
Q610 : 2SC2458
D602 MTZ7R5C
IC553 : M51953BL
IC553
7.2V
Power amp OFF
Q553, 554 : 2SD1468S
Q551, 552 : 2SD1468S
Power amp
IC552 TA8215H
IC551 TA8215H
13.1V
D551
D551 : SM-3-02LFEA
L551
TO CAR HARNESS
Lch IN
Rch IN
S.GND
GND
SWD +B
MUTE
ILLUM
ACC
SWD+B
Lch OUT
Rch OUT
TO AM FM CASSETTE CD COMBINATION
FROM AM FM CASSETTE CD COMBINATION
REAR
FRONT
TO AM FM CASSETTE CD COMBINATION
Lch +
Lch −
Rch +
Rch −
GRILLE P.C.BOARD
S903 MUTE SWITCH CSG-248
OFF
ON
IL901
IL902
D903 AA4524K
IL901, 902 : CEL-153
R909 12
R908 12
R912 10k
R911 390
R910 390
ILLUM
SWD +B
MUTE
GND
A
B
C
D
E
F

AE, AMP Unit

Consists of
· AE, AMP P.C.Board
· Grille P.C.Board

Fig. 57

15. CD MECHANISM EXPLODED VIEW

NOTE:

- *For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★: GENERALLY MOVES FASTER THAN ★.
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

- **Parts List**

Mark	No.	Part No.	Description
	1	BMZ26P030FMC	Screw
	2		Bracket
	3	CLA1311	Collar
	4	CBA1062	Screw
	5	CBH1182	Spring
	6	CNV1641	Holder
	7		Arm
	8	CBH1137	Spring
	9	CBA1076	Screw
	10		P.C.Board
	11		Bracket Unit
	12		Chassis Unit
	13		Cushion
	14	CBA1075	Screw
	15	CXA2148	Damper Unit
	16	CBH1139	Spring
	17	CNV1633	Holder
	18	YE20FUC	Washer
	19	CNV1631	Cam
	20	CBF-166	Washer
	21		Bracket
	22	CNV1636	Roller
	23		Guide
	24		Arm Unit
	25	CBH1135	Spring
	26	CNV1884	Bearing
	27	CBA1070	Screw
★★	28	CSN1009	Switch(Disc Set)
	29	CNV1644	Holder
	30	HBA-175	Screw
★★	31	CXA2129	Motor Unit(Loading)
	32		Bracket
	33	CKS-719	Connector
	34	CKS-721	Connector
★	35	SLR-981A	LED
	36	CNV1639	Holder
	37		Connector
	38	CNP1711	P.C.Board
	39	YE15FUC	Washer
	40		Arm Unit
	41	CLA1472	Collar
	42		Lever
	43	CLA1309	Collar
	44	CNV1630	Gear
	45		Arm Unit
	46		Holder
	47		Spacer
	48		Arm Unit
	49	CBH1134	Spring
	50	CNM2152	Spacer
	51		Lever Unit
	52		Bracket
	53	CNV1634	Roller
	54	CBF1002	Washer
	55	CBH1133	Spring
	56		Bracket Unit
	57	CNV1632	Bearing
	58	CBH1181	Spring
	59		Arm Unit
	60	CNV1628	Gear
	61	CNV1627	Gear
	62	CNV1629	Gear
	63	CXA2456	Gear Unit
	64		Bracket Unit
	65	CNY-265	Cushion
◉	66	CXA1910	Carriage Unit
	67	CBH1136	Spring
	68		Arm Unit
	69		Spacer
	70	CNR1079	Ball
	71	CNV1643	Clamper
	72		Guide
	73		Chassis Unit
	74	CNC1738	Holder
	75	CNC1739	Holder
	76	PMS20P030FMC	Screw
	77	HBA-163	Screw
	78	CBH1138	Spring
	79		Bracket Unit
	80		Holder Unit
	81	CBA-098	Screw
	82		Bracket
★★	83	CXA2133	Motor Unit(Carriage)
	84	CBH1104	Spring
	85	CNV1844	Spacer
	86	CNV1780	Holder
	87	CNV1674	Holder
★★	88	CSN-094	Switch(Home)
★★	89	CXM1033	Motor Unit(Spindle)
★★	90	CNT1020	Belt
	91	CXA2375	Screw Unit
	92	CNV1781	Holder
	93	CNP1709	P.C.Board
	94		Shaft
	95		Shaft
	96	CNV1512	Holder
	97	CGY1007	PU Unit
	98	CBH1199	Spring
	99	CBL1010	Short Pin
	100	CBH1105	Spring
	101	CNC1736	Holder
	102	CLA1319	Screw
	103		Holder Unit
	104	CBH1106	Spring
	105	CNV1513	Rack
	106	CNV1863	Cushion
	107		Cover
	108		Cushion
	109	YE12FUC	Washer

- **CD Mechanism**

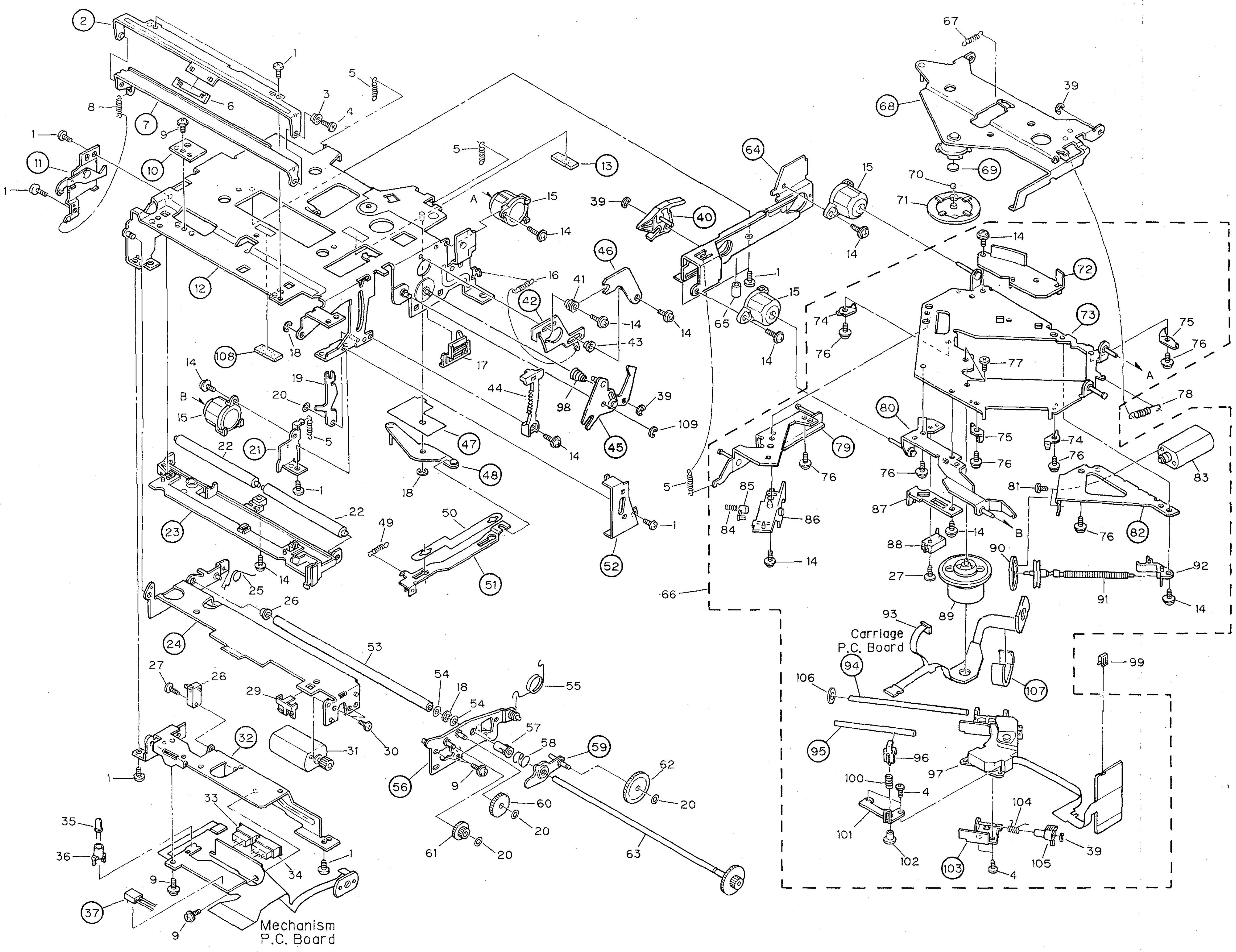

A
B
C
D
Carriage
P.C. Board
Mechanism
P.C. Board

Fig. 58

16. CASSETTE MECHANISM EXPLODED VIEW

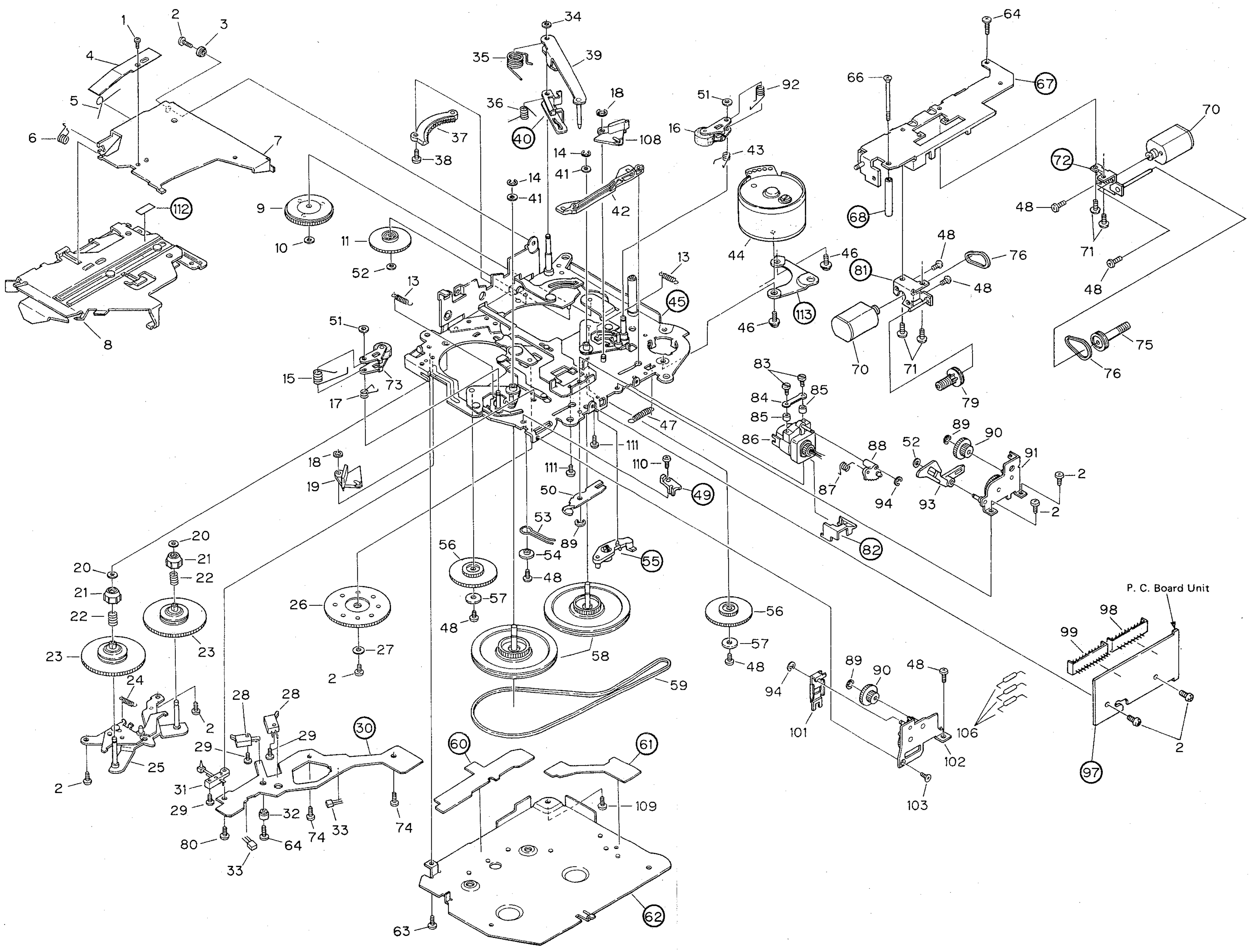

1
2
3
4
5
6
7
8
(112)
9
10
11
52
13
51
15
73
17
18
19
14
41
34
35
39
36
(40)
37
38
18
108
14
41
42
51
92
16
43
44
46
13
(45)
(113)
46
47
111
111
110
(49)
50
53
89
54
48
(55)
64
66
(67)
(68)
70
(72)
48
71
48
(81)
48
76
48
70
71
75
76
79
83
84
85
85
86
88
87
94
52
89
90
91
93
2
2
(82)
20
21
22
20
21
22
23
23
24
2
25
2
26
27
2
56
57
48
58
59
56
57
48
28
28
29
29
(30)
31
29
32
33
80
64
74
33
74
(60)
(61)
109
(62)
63
94
89
90
48
101
102
103
106
P. C. Board Unit
98
99
(97)
2

Fig. 59

- **Parts List**

Mark	No.	Part No.	Description
	1	HBA-147	Screw M1.4×1.4
	2	BMZ20P040FMC	Screw
	3	CLB-663	Bush
	4	CBE-119	Spring
	5	CBH-867	Spring
	6	CBH-837	Spring
	7	CNC2373	Arm
	8	CXA2819	Holder Unit
	9	CXA2088	Gear Unit
	10	CBF1026	Washer
	11	CNY-271	Gear
	12	·····	
	13	CBH-835	Spring
	14	CBG1003	E Type Washer
	15	CBH-832	Spring
★★	16	CXA2608	Pinch Roller Unit
	17	CBH1197	Spring
	18	YE25FUC	E Type Washer
	19	CNV1254	Arm
	20	CBF1022	Washer
	21	CNW-932	Collar
	22	CBH-827	Spring
★★	23	CXA2089	Reel Unit
	24	CBH-868	Spring
	25	CXA1481	Bracket Unit
	26	CNW-944	F/R Gear
	27	CLA1109	Collar
★★	28	CSN1003	Switch(70μS,CST IN)
	29	CBA1025	Screw M1.7×5.5
	30		P.C.Board
★★	31	CSN-089	Switch(CST SET)
	32	CLA1170	Collar
	33	SDME106B	Magnetic Resistive Device
	34	CBF-046	Washer
	35	CBH-887	Spring
	36	CBH-886	Spring
	37	CNV1075	Gear
	38	CBA1054	Screw M2×5
	39	CXD-389	Arm Unit
	40		Arm
	41	HBF-179	Washer
	42	CNV1257	Lever
	43	CBH1196	Spring
★★	44	CXM1007	Motor(Capstan)
	45		Chassis Unit
	46	PMS26P035FMC	Screw
	47	CBH-830	Spring
	48	HBA-175	Screw M2×2.5
	49		Spacer
	50	CBL1050	Spring
	51	CBF1025	Washer
	52	CBF-126	Washer
	53	CBH-893	Spring
	54	CLA1110	Collar
	55		Clamper
	56	CNV1616	Gear
	57	CLA1238	Collar
	58	CNV1572	Flywheel
★★	59	CNT-111	Belt
	60		Insulator
	61		Insulator
	62		Cover
	63	BMZ20P030FMC	Screw
	64	CBA-172	Screw M1.7×5.5
	65	·····	
	66	CBA-165	Screw M2×25
	67		Guide
	68		Spacer
	69	·····	
★★	70	CXA2429	Motor Unit (FF/REW,Head Position)
	71	HBA-174	Screw
	72		Bracket Unit
	73	CXA2609	Pinch Roller Unit
	74	CBA1037	Screw M2×2.5
	75	CNV1255	Pulley
★★	76	CNT1010	Belt
	77	·····	
	78	·····	
	79	CNV1256	Pulley
	80	CBA1054	Screw M2×5
	81		Bracket Unit
	82		Cover
	83	CBA1055	Screw M1.4×8
	84	CBE-114	Spring
	85	CNY-134	Azimuth Rubber
★★	86	CXA2462	Head Unit
	87	CBH-829	Spring
	88	CNW-939	Gear
	89	YE12FUC	E Type Washer
	90	CNV1262	Gear

Mark	No.	Part No.	Description
	91	CXA1688	Holder Assy
	92	CBH-831	Spring
	93	CNV1495	Arm
	94	YE15FUC	E Type Washer
	95	·····	
	96	·····	
	97		P.C.Board
	98	CKS1055	Connector(8P)
	99	CKS1059	Connector(12P)
	100	·····	
	101	CNH-004	Arm
	102	CXA1689	Holder Assy
	103	HBA-209	Screw M2×2
	104	·····	
	105	·····	

Mark	No.	Part No.	Description
★	106	1S1555	Diode
	107	·····	
	108	CNV1253	Arm
	109	CBA1060	Screw M2×7
	110	CBA1015	Screw M2×4
	111	CBA1041	Screw M2×2.5
	112		Spacer
	113		Bracket

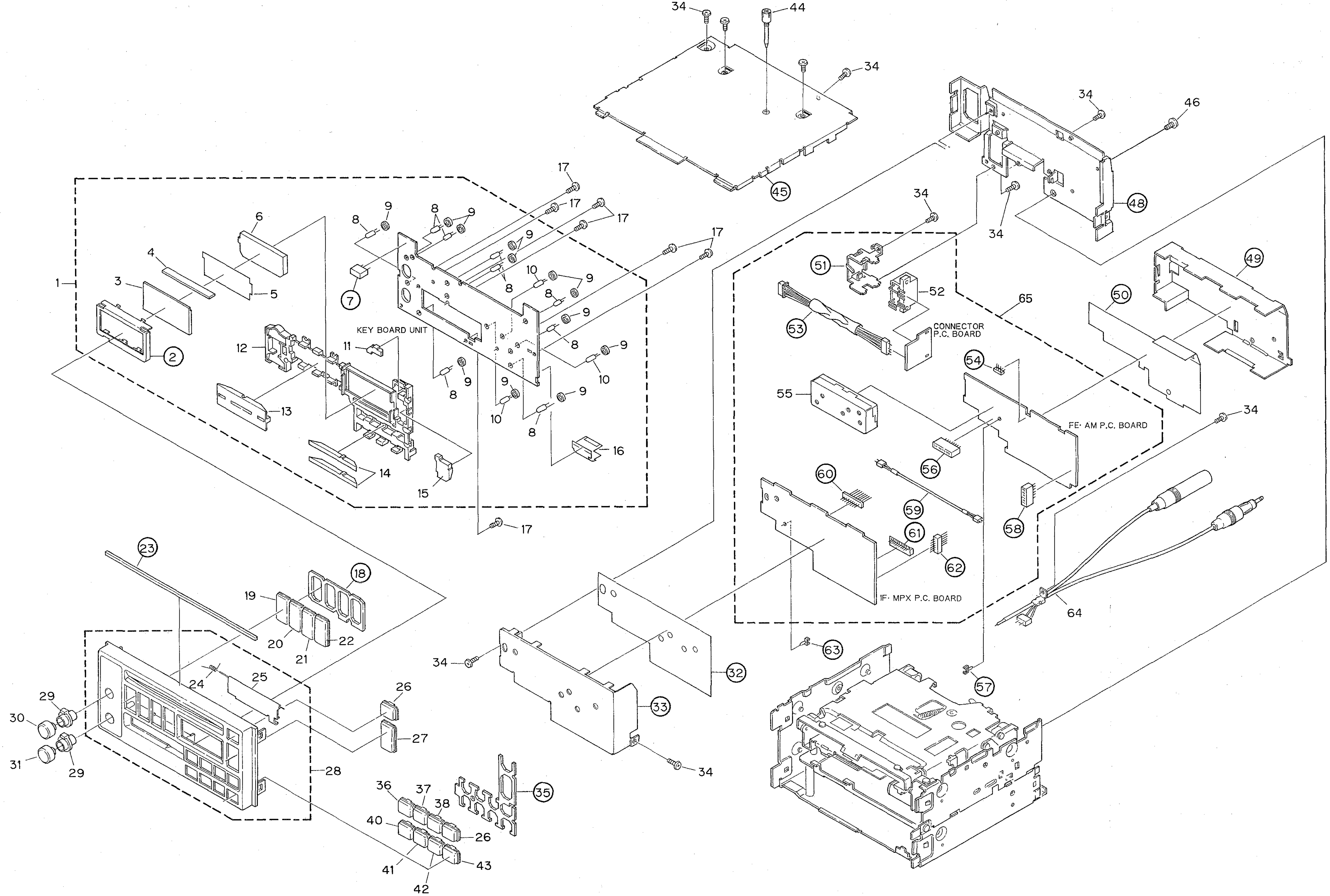
17. CHASSIS (1) EXPLODED VIEW

- **Parts List**

Mark	No.	Part No.	Description
◉	1	CWM1770	Key Board Unit
	2		Holder
	3	CWW1173	LCD
	4	CNV1777	Connector
	5	CNM2095	Plate
	6	CNV1774	Lens
	7		Connector
★★	8	CEL-153	Lamp
	9	CNM1993	Spacer
★★	10	CEL1071	Lamp
	11	CNV1773	Lens
	12	CNV1776	Housing
	13	CNV1770	Lens
	14	CNV1771	Lens
	15	CNV1772	Lens
	16	CNP1806	P.C.Board
	17	BPZ20P080FMC	Screw
	18		Cushion
★	19	CAC1906	Button(AUTO,SCAN)
★	20	CAC1907	Button(1,4)
★	21	CAC1908	Button(2,5)
★	22	CAC1909	Button(3,6)
	23		Cushion
	24	CBH1044	Spring
	25	CAT1163	Door
★	26	CAC1914	Button(EJECT)
★	27	CAC1910	Button(UP,DOWN)
	28	CXA2590	Grille Unit
★	29	CAA1141	Knob
★	30	CAA1168	Knob
★	31	CAA1139	Knob
	32		Insulator
	33		Case
	34	BMZ30P050FMC	Screw
	35		Cushion

Mark	No.	Part No.	Description
★	36	CAC1911	Button(DD)
★	37	CAC1913	Button(APC)
★	38	CAC1912	Button(PRO)
	39	·····	
★	40	CAC1915	Button(FM)
★	41	CAC1916	Button(AM)
★	42	CAC1917	Button(CD)
★	43	CAC1918	Button(TAPE)
	44	CBA1096	Screw
	45		Case Unit
	46	BMZ50P060FMC	Screw
	47	·····	
	48		Case
	49		Case
	50		Insulator
	51		Bracket
	52	CKM1035	Connector
	53		Connector
	54		Plug
	55	CWB1005	FM Front End
	56		Plug
	57		Clamper
	58		Plug
	59		Connector
	60		Plug
	61		Plug
	62		Plug
	63		Clamper
	64	CDH1097	Antenna Cable
◉	65	CWE1119	Tuner Unit

- **CHASSIS (1)**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KEY BOARD UNIT
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CONNECTOR P.C. BOARD
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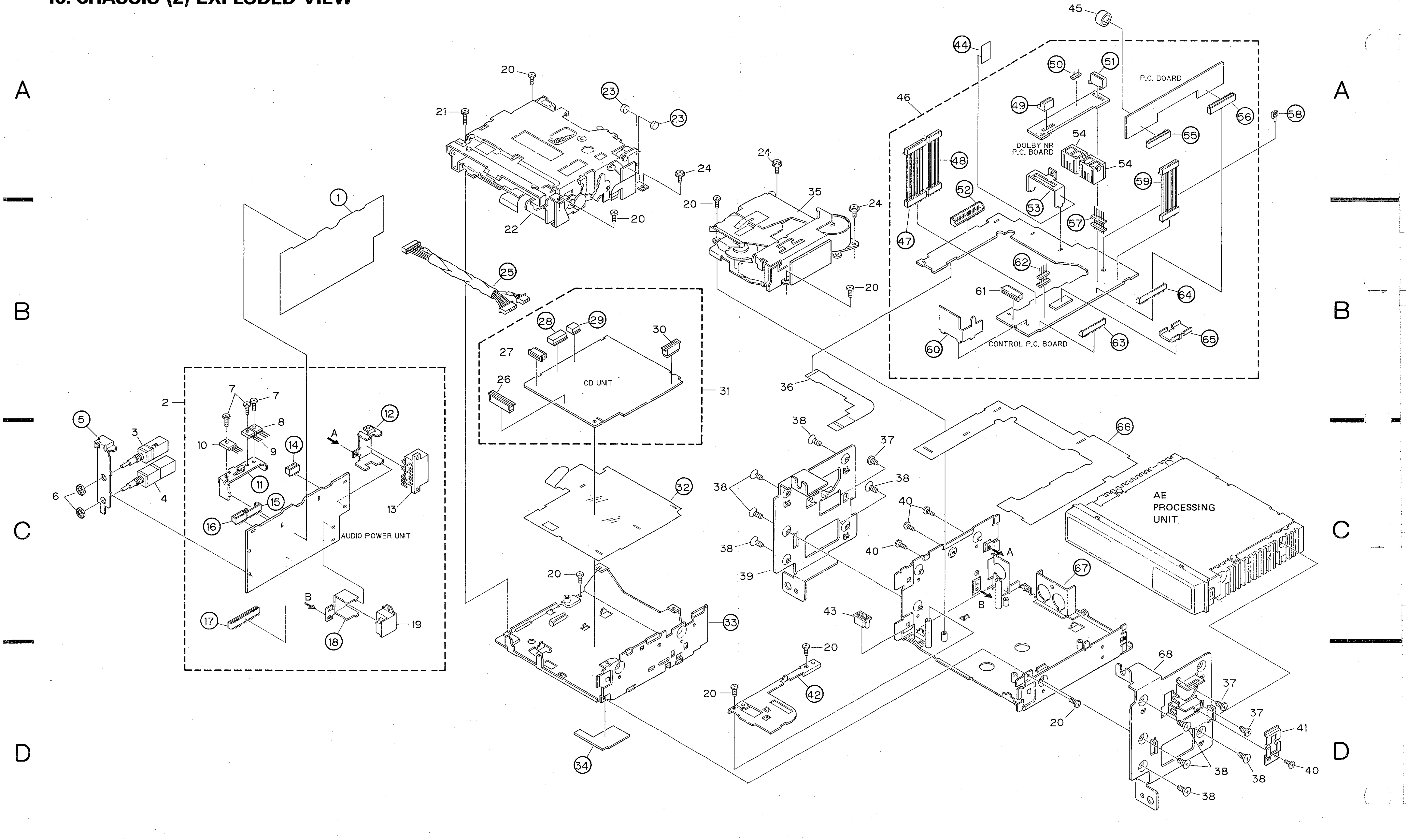
FE· AM P.C. BOARD
IF· MPX P.C. BOARD

Fig. 60

18. CHASSIS (2) EXPLODED VIEW


A
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C
D
P.C. BOARD
DOLBY NR
P.C. BOARD
CONTROL P.C. BOARD
CD UNIT
AUDIO POWER UNIT
AE
PROCESSING
UNIT
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Fig. 61

● Parts List

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
	1		Insulator		36	CNP1968	P.C.Board
◉	2	CWM1775	Audio Power Unit		37	BMZ50P080FMC	Screw
★★	3	CCS1122	Volume		38	CMZ50P080FMC	Screw
★★	4	CCS1104	Volume		39	CNC2771	Bracket
	5		Bracket		40	BMZ30P050FMC	Screw
	6	NK70FMC	Nut		41	CNC2531	Holder
	7	BMZ30P060FMC	Screw		42		Bracket
★★	8	2SC3421	Transistor		43	CNV1823	Guide
★★	9	2SA1358	Transistor		44		Insulator
★★	10	AN7805R	IC		45	CPV1005	Buzzer
	11		Bracket	◉	46	CWM1769	Control Unit
	12		Bracket		47		Connector
	13	CKM1036	Plug		48		Connector
	14		Plug		49		Connector
	15		Plug		50		Plug
	16		Plug		51		Connector
	17		Connector		52		Plug
	18		Bracket		53		Bracket
	19	CKS1513	Plug		54	CKS1507	Connector
	20	BMZ26P050FMC	Screw		55		Connector
	21	PMA26P100FMC	Screw		56		Connector
◉	22	CXK2220	CD Mechanism Unit		57		Plug
	23		Insulator		58		Clamper
	24	PMF26P050FMC	Screw		59		Connector
	25		Connector		60		Bracket
	26	CKS1415	Connector		61	CKS1175	Connector
	27	CKS1169	Connector		62		Plug
	28		Plug		63		Plug
	29		Plug		64		Plug
	30	CKS1328	Connector		65		Heat Sink
◉	31	CWX1190	CD Unit		66		Insulator
	32		Insulator		67		Chassis
	33		Chassis		68	CNC2770	Bracket
	34		Spacer				
◉	35	CXK1695	Cassette Mechanism Assy				

19. AE PROCESSING UNIT EXPLODED VIEW

- **Parts List**

Mark	No.	Part No.	Description
	1	CXA2614	Grille Assy(4141ZM)
★	2	CAC1929	Button (4141ZM)
★	3	CAC1852	Button (4041ZM)
	4	CXA2555	Grille Assy(4041ZM)
	5	BPZ20P060FMC	Screw
◉	6	CWK1024	AE,AMP Unit(4041ZM)
		CWK1026	AE,AMP Unit(4141ZM)
	7	CNV1934	Lens (4041ZM)
	8	CNV1935	Holder (4041ZM)
★★	9	CEL-153	Lamp (4041ZM)
★	10	AA4524K	LED (4041ZM)
	11	CNV1942	Lens (4041ZM)
	12	BPZ20P060FZK	Screw (4041ZM)
	13	BPZ20P060FZK	Screw (4141ZM)
	14	BPZ20P060FMC	Screw (4041ZM)
	15	BPZ20P060FMC	Screw (4141ZM)
★★	16	CEL-153	Lamp (4141ZM)
★	17	AA4524K	LED (4141ZM)
	18	CNV1983	Holder (4141ZM)
	19	CNV1984	Lens (4141ZM)
	20	CDE2135	Connector
	21	BMZ30P060FMC	Screw
	22	BMZ30P140FMC	Screw
	23		Heat Sink
★★	24	TA8215H	IC
	25		Holder
	26		Plug
	27		Plug
	28		Plug
	29		Plug
	30		Plug
	31		Holder
	32	CKM1035	Plug
	33		Case
	34	CDE2139	Connector
	35	CDE2134	Connector
	36	CDE2137	Cord
	37	CDE2138	Cord
	38		Case
	39		Heat Sink
	40		Insulator
	41	BMZ50P080FMC	Screw
	42	CNC2358	Bush
	43		Chassis

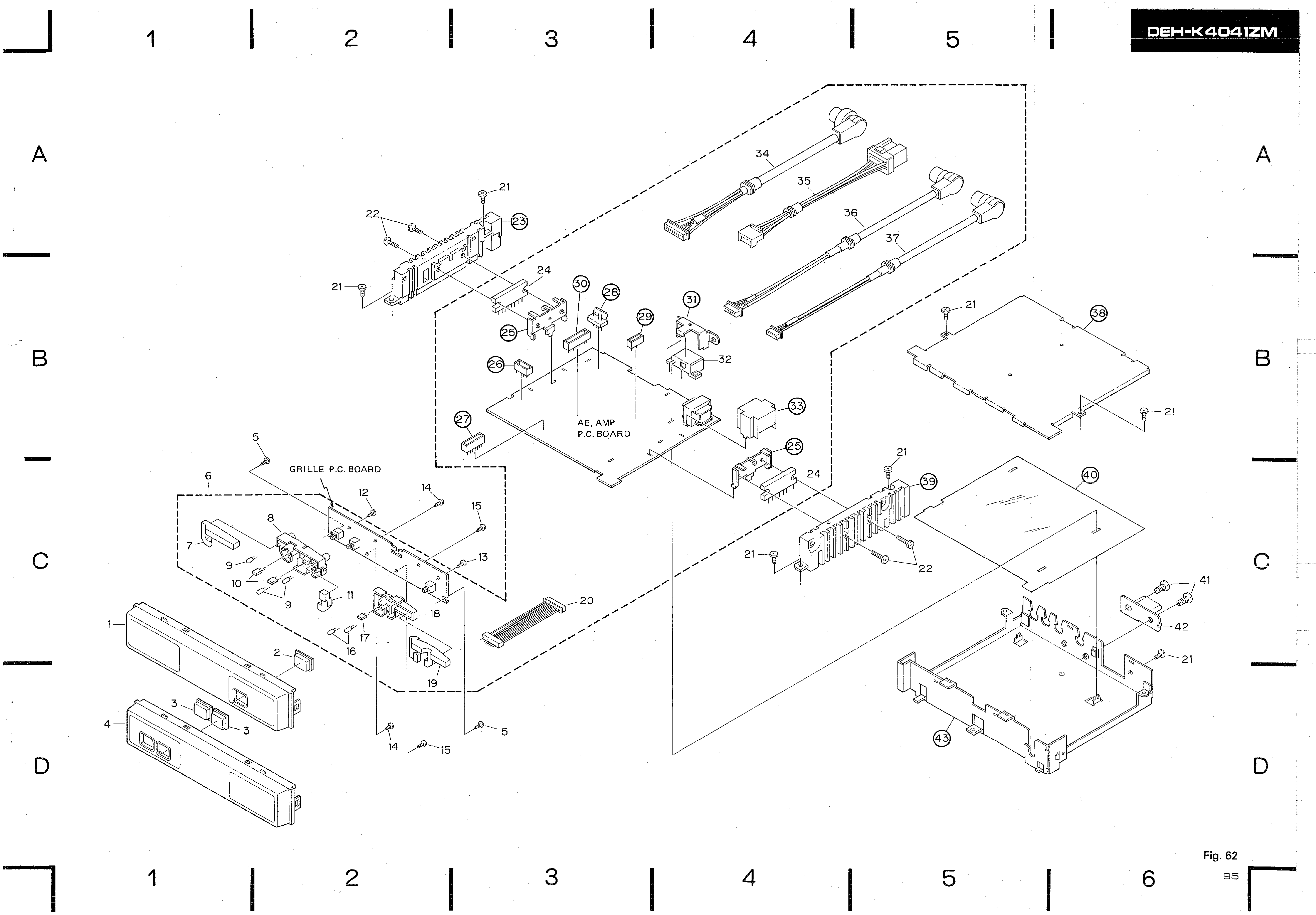
A
B
C
D
AE, AMP
P.C. BOARD
GRILLE P.C. BOARD

Fig. 62

20. ELECTRICAL PARTS LIST

NOTE:

- *For your parts Stock Control, the fast moving items are indicated with the marks ** and *.*
  *** : GENERALLY MOVES FASTER THAN *.*
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*
  Chip Resistor
  RS1/8S □□□J, RS1/10S □□□J
  Chip Capacitor (except for CQS.....)
  CKS....., CCS....., CSZS.....

Unit Number : CWB1005
Unit Name : FM Front End

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
**	IC 1		CWW1015
**	IC 2		PA4009
**	Q 1		2SK241
**	Q 2		2SC2753
**	Q 3		2SK241
*	D 1		KV1310A-3
	L 1	Coil	CTC1001
	L 2	Coil	CTC1002
	L 3	Coil	CTC1003
	L 4	Inductor	CTF-185
	T 1	Coil	CTC1005
	T 2	Coil	CTC1004
	CF 1 2	Ceramic Filter	CTF-182

RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	R 1 14		RS1/8S223J
	R 2		RS1/8S473J
	R 3		RD1/4PS222JL
	R 4		RD1/4PS221JL
	R 5 10		RS1/8S560J
	R 6 9		RS1/8S683J
	R 7		RS1/8S101J
	R 8		RS1/8S680J
	R 11		RS1/8S391J
	R 12		RS1/8S331J
	R 13		RD1/4PS680JL (RD1/6PS680J)

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	C 1		CCSSH330J50
	C 2		CCSSH390J50
	C 3		CCSCH060D50 (CCSCH060C50)
	C 4		CCSTH060C50 (CCSTH060D50)
	C 5 11 15 20		CKSYB222K50
	C 6		CCSCH040C50
	C 7 10		CKSYB103K50
	C 8		CCSCH100D50
	C 9		CCSSH560J50
	C 12 18		CCSTH150J50
	C 13		CCSTH330J50
	C 14		CCSTH100D50
	C 16 19 21		CKSYB223K50
	C 17		CCSUJ080D50
	C 22		CEA2R2M35LS
	C 23		CEA3R3M25LS
	C 24		CCSSH030C50

Unit Number :
Unit Name : Tuner Unit

Tuner Unit
Consists of ● Connector P.C.Board ● FE·AM P.C.Board ● IF·MPX P.C.Board

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
**	IC 101		LA1137N
**	IC 131		PA5011
**	IC 132		KHA141A
**	IC 133		KHA505
**	IC 134		LA2110
**	IC 135		LA3430P
**	IC 136		TA75558S
**	IC 137		LC7218
**	IC 138		KHA805
**	Q 101		2SK435
**	Q 102 135 138		2SC2458
**	Q 103 104 131 133 134		DTC124ES
**	Q 132 143 144		DTA114ES
**	Q 136		2SJ105
**	Q 137 140		2SC3113
**	Q 139		2SK330
**	Q 141 142		2SA1150
*	D 101 102 103 104 105 132 133 135 136 137		1SS133
*	D 106		KV1280F1-2
*	D 107 138 139 140		1SS133
*	D 131		1SV99
*	D 134		RD3R0ESB2
*	D 141		RD5R1JSB2
	L 101	Ferri-Inductor	CTF-157
	L 131 132 133 134	Ferri-Inductor	LAU150K
	T 101	Coil	CTB-149
	T 102	Coil	CTB-171
	T 103	Coil	CTB1025
	T 104	Coil	CTB1026
	T 105	Coil	CTE1017
	T 106	Coil	CTE1018
	T 107	Coil	CTB1024
	T 131	Transformer	CTC-195
	T 132	Coil	CTC1029
	CG 131 132	Surge Protector	DSP-301NS00B
	CF 101	Filter	CTF-100
	CF 102	Ceramic Resonator	CTF1039
	CF 131	Ceramic Filter	CTF-182
	CR 132		CWW1145
	CR 133		CWW-107
	X 131	Crystal Resonator	CSS1030
	X 132	Ceramic Resonator	CSS1022
**	VR 101	Semi-fixed 1kΩ (B)	VRTB4VS102
**	VR 131 132 134	Semi-fixed 22kΩ (B)	VRTB4VS223
**	VR 133	Semi-fixed 10kΩ (B)	VRTB4VS103
		FM Front End	CWB1005

RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	R 101		RD1/4PS152JL
	R 102 107 113 114 120 149 150		RS1/10S103J
	R 103 133		RS1/10S471J
	R 104 154		RS1/10S682J
	R 105 135		RS1/10S330J
	R 106		RS1/10S220J
	R 108		RS1/10S394J
	R 109 176 177 185 186 187 188 189		RS1/10S222J
	R 110 146 160 161 162 178 183		RS1/10S472J
	R 111		RS1/10S153J
	R 112 174 175		RS1/10S223J
	R 115 121		RS1/10S513J
	R 116 167 168		RS1/10S101J
	R 117		RD1/4PS562JL
	R 118 119 145 170 171 172 173		RS1/10S104J
	R 131		RS1/10S681J
	R 132		RS1/8S4R7J
	R 134		RS1/8S223J
	R 139 158 180 181		RS1/10S102J
	R 140		RD1/4PS331JL
	R 141		RD1/4PS183JL
	R 142		RD1/4PS682JL
	R 143		RD1/4PS392JL
	R 144		RD1/4PS472JL
	R 147		RS1/10S474J
	R 148 151		RD1/4PS223JL
	R 152 182		RD1/4PS222JL
	R 153		RS1/10S392J
	R 155		RS1/10S563J
	R 156		RS1/10S393J
	R 157 159		RS1/10S473J
	R 163 164		RS1/10S332J
	R 165 166		RD1/4PS333JL
	R 169		RS1/10S334J
	R 179		RS1/10S152J
	R 184		RD1/4PS103JL
	R 190		RD1/4PS104JL
	R 191 192		RD1/4PS224JL

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	C 101 104 108 109 110 116 117 123 139 140		CKSQYB223K25
	C 102 111 113		CCSQCH100D50
	C 103		CKSYB223K25
	C 105 126		CCSQCH220J50
	C 106 147		CEA101M10LS
	C 107 115 142 143 163 164 168 182		CEA010M50LS2
	C 112		CCSQCH010C50
	C 114 118		CKSYB333K25
	C 119 180		CKSYF105Z25
	C 120		CEA4R7M35LS
	C 121 165		CEA3R3M50LS
	C 122		CEAR47M50LS2
	C 124		CQPA751G2A
	C 125		CCSQCH390J50
	C 127		CQPA101G2A
	C 128 133 137 144 150 151 154 170 172		CKSQYB103K50
	C 129 153 161		CEA470M16LS
	C 130		CCSQSL270J50
	C 131 156 177		CKSQYB222K50
	C 132 136 171 179		CEA100M25LS
	C 134		CEA220M16LS
	C 135		CCSQSL471J50
	C 138		CKSQYB123K50
	C 141		CCSQCH180J50
	C 145		CEA4R7M16NPLL
	C 146		CASA330K16
	C 148		CEA2R2M50LS2
	C 149		CKSYB473K25
	C 152		CKSQYB182K50
	C 155 159 160		CKSQYB332K50
	C 157 158		CKSQYB183K25
	C 162		CKSQYB102K50
	C 166 178 181		CKSQYB223K25
	C 167		CSZAR22K35
	C 169	4.7μF/16V	CCH1005
	C 173 174		CCSQCH101J50
	C 175 176		CCSQCH270J50

Unit Number :
Unit Name : AE, AMP Unit

AE,AMP Unit

Consists of
· AE,AMP P.C.Board
· Grille P.C.Board

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
**	IC 551 552		TA8215H
**	IC 553		M51953BL
**	IC 601 602		TA75558S
**	IC 603		CWW1059
**	IC 604		MN3003
**	Q 551 552 553 554		2SD1468S
**	Q 601 602		2SC2458L
**	Q 603 604 (K4041ZM)		DTC124ES
**	Q 605 606		DTC124ES
**	Q 607 608		2SA1048
**	Q 609		2SA1199S
**	Q 610		2SC2458
**	Q 611 612		2SD667
*	D 551		SM-3-02LFEA
*	D 601		MTZ7R5B
*	D 602		MTZ7R5C
*	D 901 902	LED (K4041ZM)	AA4524K
*	D 903	LED (K4141ZM)	AA4524K
	L 551	Choke Coil	CTH1017
**	S 901 902	Switch (K4041ZM)	CSG-248
**	S 903	Switch (MUTE)(K4141ZM)	CSG-248
**	IL 901 902 903	Lamp(K4041ZM)	CEL-153
**	IL 901 902	Lamp(K4141ZM)	CEL-153

RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	R 551 645 646	(K4041ZM)	RD1/4PS222JL
	R 551	(K4141ZM)	RD1/4PS272JL
	R 552 635 636 637 638 690 693 695		RD1/4PS102JL
	R 553 554 565 566 578 615 616		RD1/4PS332JL
	R 555 556 567 568 579 601 602 609 610		RD1/4PS103JL
	R 557 558 569 570 679 680 694 696		RD1/4PS561JL
	R 559 560 561 562 571 572 573 574		RD1/4PS010JL
	R 563 564 603 604 659 660 667 668		RD1/4PS682JL
	R 575 580 581 582 673 674		RD1/4PS473JL
	R 576		RD1/4PS101JL
	R 577 617 618 663		RD1/4PS152JL
	R 601 602	(K4041ZM)	RD1/4PS153JL
	R 601 602	(K4141ZM)	RD1/4PS103JL
	R 611 612 649 650 651 652		RD1/4PS562JL
	R 613 614 621 622 665 666 689 691 692		RD1/4PS472JL
	R 619 620		RD1/4PS273JL
	R 623 624		RD1/4PS271JL
	R 627 628 631 632		RD1/4PS821JL
	R 629 630		RD1/4PS122JL
	R 633 634		RD1/4PS683JL
	R 639 640		RD1/4PS391JL
	R 641 642		RD1/4PS681JL
	R 647 648	(K4041ZM)	RD1/4PS334JL
	R 653 654 655 656 675 676		RD1/4PS104JL
	R 657		RD1/4PS100JL
	R 658		RD1/4PS823JL
	R 661 662		RD1/4PS222JL
	R 664		RD1/4PS153JL
	R 669 670	(K4041ZM)	RD1/4PS822JL
	R 669 670	(K4141ZM)	RD1/4PS471JL
	R 671 672	(K4041ZM)	RD1/4PS104JL
	R 671 672	(K4141ZM)	RD1/4PS103JL
	R 677 678		RD1/4PS221JL
	R 683 684		RD1/4PS333JL
	R 697 698		RD1/4PS331JL
	R 901 902 903	(K4041ZM)	RD1/4PS4R7JL
	R 904 905 906 907	(K4041ZM)	RD1/4PS271JL
	R 908 909	(K4141ZM)	RD1/4PS120JL
	R 910 911	(K4141ZM)	RD1/4PS391JL
	R 912	(K4141ZM)	RD1/4PS103JL

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	C 551 552		CEA010M50L2
	C 553 554 567 568 637 638		CQMA222J50
	C 555 556		CEA100M16L2
	C 557 558 559 560 571 572 573 574		CQMA104J50
	C 561 564 620		CQMA103J50
	C 562 576		CEA221M16L2
	C 563 577	2200μF/16V	CCH-123
	C 565 566 604 605 606		CEAR68M50LS2
	C 569 570		CEA6R8M35LS
	C 575 609 610		CEA100M16L2
	C 578		CEA2R2M50LS
	C 579		CEA2R2M50LS2
	C 601 602		CEA010M50L2
	C 603		CEAR68M50LS
	C 607 608		CQFAH684J50L
	C 611 612		CQEA334J63
	C 613 614		CEA2R2M50L2
	C 615 616		CQMA563J50
	C 617 618		CQMA392J50
	C 619		CEA330M16L2
	C 621 622	(K4041ZM)	CQMA473J50
	C 623 624 631 632 633 634		CEA4R7M35L2
	C 625		CCCCH330J50
	C 627 628	(K4041ZM)	CQMA102J50
	C 626 639 640 641 642		CEA221M10L2
	C 629 630	(K4041ZM)	CQMA104J50
	C 635 636		CQMA183J50
	C 643		CEA102M6R3L2
	C 644	(K4141ZM)	CEA100M16L2
	C 901 902	(K4041ZM)	CEAR33M50L2

Unit Number :
Unit Name : CD Unit

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
**	IC 351		CXA1081M
**	IC 601		CXA1082AQ
**	IC 651 652		PA3023
**	IC 655 657		M5218FP
**	IC 656		M5233FP
**	IC 701		CXD1135Q
**	IC 702		CXK5816M-15L
**	IC 703		μPD6355G
**	IC 704		KHA221A
**	IC 751		PD4136B

Mark	Circuit Symbol & No.	Part Name	Part No.
**	IC 754		M54546AL
**	Q 351		2SB822F
**	Q 601 652 653 705	Chip Transistor	UN2211
**	Q 651 701 760	Chip Transistor	UN2211
**	Q 702 706 759	Chip Transistor	UN2111
**	Q 703 704	Chip Transistor	2SD1048
**	Q 758		2SD1226MF
*	D 651		ERA15-02
*	D 652		ERA82-004Y
*	D 653 654 655 656 657 658 659		ERA82-004VH
*	D 661 662		HZS2ALL
*	D 701	Chip Diode	MA151WA-MN
*	D 702	Chip Diode	MA151K-MH
*	D 755	Chip Diode	MA3062
	L 651	Choke Coil	CTH1035
	TH 351	Thermister	CCX1001
	TH 751	Thermister	CCX-021
	X 701	Crystal Resonator	CSS1027
	X 751	Ceramic Resonator	CSS-042
**	VR 351	Semi-fixed	CCP1005
**	VR 352	Semi-fixed	CCP1006
**	VR 604	Semi-fixed 2.2kΩ (B)	HCP-267
**	VR 651	Semi-fixed 47kΩ (B)	HCP-275

RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	R 351		RS1/2P220JL
	R 353 381 708 709 714 724 725 726 727 728		RS1/10S102J
	R 354 363 378		RS1/10S223J
	R 355 610 625		RS1/10S113J
	R 356 357 358 359 669		RS1/10S563J
	R 360 361		RS1/10S124J
	R 362 763		RS1/10S564J
	R 364 365 618 671		RS1/10S105J
	R 366 377 666		RS1/10S562J
	R 367 780		RS1/10S104J
	R 379 722 723		RS1/10S472J
	R 380 617 628 682		RS1/10S203J
	R 382		RS1/10S363J
	R 383		RS1/10S823J
	R 384 630		RS1/10S273J
	R 601 602		RS1/10S101J
	R 606		RS1/10S224J
	R 607		RS1/10S683J
	R 608		RS1/10S823J
	R 609 614 619 627 773		RS1/10S104J
	R 611		RS1/10S432J
	R 612		RS1/10S623J
	R 613		RS1/10S624J
	R 616		RS1/10S183J
	R 620		RS1/10S332J
	R 621		RS1/10S184J
	R 622 670 687 696 697 715 718 719 751		RS1/10S103J
	R 623		RS1/10S473J
	R 624		RS1/10S393J
	R 629		RS1/10S153J
	R 631		RS1/10S272J
	R 634		RS1/10S474J
	R 665 790		RS1/10S821J
	R 667 684 686 717		RS1/10S472J
	R 668 679		RS1/10S392J
	R 672		RS1/10S364J
	R 673		RS1/10S473J
	R 674 710 711 716		RS1/10S332J
	R 676 799		RS1/10S201J
	R 677		RS1/10S201J
	R 678		RS1/10S223J
	R 680		RS1P1R5JL
	R 681		RS1/10S203J
	R 683		RS1/10S101J
	R 685 692		RS1/10S105J
	R 690		RS1/10S272J
	R 691 703 755		RS1/10S103J
	R 694 786		RS1/10S822J
	R 701		RS1/10S100J
	R 712 713		RS1/10S392J
	R 721		RS1/10S4R7J
	R 747		RS1/10S0R0J
	R 752 775		RS1/10S103J
	R 753 754 756 779		RS1/10S681J
	R 766 767		RS1/10S681J
	R 770 771 772		RS1/10S222J
	R 774		RS1/10S333J
	R 787		RS1/10S0R0J

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	C 351		CEA101M6R3LS
	C 352 611 625 626 662 664 713 721 724 727		CKSQYB103K50
	C 353 613 666		CKSYB333K25
	C 354 357		CASA330M6R3
	C 355 667 668 714		CKSQYB103K50
	C 356		CKSYB332K50
	C 359 614		CEAR47M50LS
	C 360 361		CSZS010M16
	C 370 703 704		CCSQCH220J50
	C 371 615		CKSQYB102K50
	C 372		CCSQCH100D50
	C 373 627		CCSQCH220J50
	C 601		CKSQYB222K50
	C 602 653 708 709		CEA100M25LS
	C 603 607 612 716		CEA100M6R3LS
	C 605 620 622 628 629		CKSYB473K25
	C 606		CEA220M16LS
	C 608		CEA220M6R3NPLL
	C 609 756		CKSQYB472K50
	C 610 619		CCSQCH221J50
	C 616		CEA220M6R3LS
	C 617	4.7μF/16V	CCH1050
	C 618		CKSQYB682K50
	C 621		CEA4R7M16NPLL
	C 623		CKSQYB272K50

Mark	Circuit Symbol & No.	Part Name	Part No.
	C 624		CCSQCH391J50
	C 651 670		CKSYF224Z25
	C 652	470μF/16V	CCH-114
	C 654 658		CCSQCH221J50
	C 656		CEA100M16LS
	C 661 663		CEA010M50NPLL
	C 665 678		CKSYB473K25
	C 671 672		CSZSR68M20
	C 674 705		CASA100M6R3
	C 675 676		CEA2R2M35LS
	C 677 679		CCSQSL681J50
	C 680		CCSQSL681J50
	C 681		CKSYB393K25
	C 701 710 712 726		CASA6R8M6R3
	C 702		CASA220M6R3
	C 706 707		CCSQCH470J50
	C 717 718		CEA470M6R3LS
	C 719		CEA101M6R3LS
	C 720		CEA101M6R3LS
	C 722 723		CEA330M6R3LS
	C 728 729 751 758		CKSQYB103K50
	C 752		CCSQCH300J50
	C 753		CCSQCH300J50
	C 755		CEA221M6R3LL
	C 757		CASA6R8M10

Unit Number :
Unit Name : Control Unit

Control Unit

Consists of
- Control P.C. Board
- Dolby NR P.C. Board
- P.C. Board

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
**	IC 801		PD4155B
**	IC 802		PA3022A
**	IC 803		M51953BL
**	IC 804		M51957BL
**	IC 871		M51522AL
**	IC 872		CXA1102P
**	Q 801 802 813	Chip Transistor	2SC2712
**	Q 803 805		2SC2458
**	Q 804 806 809 871 872 873		DTC124ES
**	Q 807		2SA1358
**	Q 808		2SD1640
**	Q 810 811		2SD1864
**	Q 812 874		2SA1048
*	D 801 802 803 804 805 809 810 813 815 819		1SS133
*	D 806 808 812		RD6R8JSB3
*	D 807		RD22JSB1
*	D 811 814		RD6R2JSB2
*	D 817 820 821 822 871		1SS133
	L 801 802	Ferri-Inductor	LAU150K
	CR 871		CWW1087

Mark	Circuit Symbol & No.	Part Name	Part No.
	IB 801 802 803		CWW1048
	X 801	Crystal Resonator	CSS1023
**	VR 871 872	Semi-fixed 470Ω (B)	VRTB4VS471

RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	R 801 805 809 810 811 812 846 847 848 849		RS1/10S472J
	R 802		RS1/10S392J
	R 803		RS1/10S684J
	R 804		RS1/10S562J
	R 806 807 808 814 828 881 882		RS1/10S473J
	R 813 815 816		RD1/4PS473JL
	R 817 830		RD1/4PS104JL
	R 818 819 820 825		RS1/10S681J
	R 821 822 823 824		RS1/10S682J
	R 826 827 831 839 841 842		RS1/10S103J
	R 829 837 844 845		RS1/10S223J
	R 832		RS1P561JL
	R 833		RS1/8S223J
	R 834		RS1/8S222J
	R 835 855 879 883 884		RD1/4PS102JL
	R 873		RD1/4PS101JL
	R 838 836		RD1/4PS561JL
	R 840		RD1/4PS221JL
	R 843		RS1/8S561J
	R 850 851 852 853		RS1/10S472J
	R 854		RD1/4PS332JL
	R 874		RD1/4PS433JL
	R 875 877		RD1/4PS103JL
	R 876 878		RD1/4PS223JL
	R 885 886		RD1/4PS821JL

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	C 801 802 818 820 822 825		CEA220M16LS
	C 803 830		CEA101M16LL
	C 804		CKSYB223K25
	C 805 806 807 808 809 810		CKSYF473Z50
	C 811 814		CCSQCH330J50
	C 812		CKSQYB392K50
	C 813 829		CKSYF104Z25
	C 815		CEA470M16LS
	C 816 831		CKSQYF473Z25
	C 817 819 821 824 826 827		CKSQYB223K25
	C 823		CEA010M50LS2
	C 828 883 884		CEAR68M50LS2
	C 870		CCSCH090D50
	C 871 872		CKSQYB561K50
	C 873 874		CEANL4R7M35LL
	C 875 876		CEA470M16L2
	C 878 882 887		CEA101M10LS
	C 879 880		CEALNP010M50
	C 881		CEAR15M50LS2
	C 885 886		CEA4R7M35LS

Unit Number :
Unit Name : Key Board Unit

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
**	IC 901		LC7582P
*	D 901	LED	MU16-3105
**	IL 901 902 903	Lamp	CEL1071
**	IL 904 905 906 907 908 909 910 911 912	Lamp	CEL-153
**	S 901 902 903 904 905 906 907 908 909 910	Switch	CSG-253
**	911 912 913 914 915 916 917 918 919		
		LCD	CWW1173
	R 901		RD1/4PS104JL
	R 902		RN1P6R8JL
	C 901		CKPYB331K50L
	C 902		CKPYF223Z25L

Unit Number :
Unit Name : Audio Power Unit

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
**	IC 201		KHA125
**	IC 202 203 204		TA75558S
**	IC 205		AN7805R
**	IC 206		M5236L
**	Q 201 202		DTC343TS
**	Q 203 211		DTC124ES
**	Q 204		2SB1243
**	Q 205		2SA1358
**	Q 206		2SC3421
**	Q 207 209		DTC114ES
**	Q 208		2SB1357
**	Q 210		DTA124ES
*	D 201 202 205 206		1SS133
*	D 203		RD9R1JSB2
*	D 204		RD6R8JSB3
*	D 207 210 211		ERA15-02VH
*	D 208 209		SM-3-02LFDA
*	D 212		RD5R6JSB2
	L 201 202	Coil	CTH1053
	L 203	Ferri-Inductor	CTF-157
	CR 201		CWW1131

RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	R 201		RS1/10S393J
	R 202		RD1/4PS222JL
	R 203 204		RS1/10S102J
	R 205 206		RS1/10S332J
	R 207 208 217 218 219 220 221 222 223 224		RS1/10S472J
	R 209 210 234		RS1/10S472J
	R 211 233		RS1/10S392J
	R 212		RS1/8S472J
	R 213 214 215 216 237		RS1/10S333J
	R 225 226 227 228 241 242		RS1/10S101J
	R 229 230 231 232 243 244		RS1/10S223J
	R 235 236 239		RS1/10S103J
	R 238		RS1/8S333J
	R 240 258		RS1/8S103J
	R 245		RD1/4PS221JL
	R 246		RD1/4PS561JL
	R 248 249		RS1/8S152J
	R 250		RD1/2VS102JL
	R 251		RS1/8S223J
	R 252		RS1/8S102J
	R 253 254		RD1/4PS101JL
	R 256		RD1/4PS223JL
	R 257		RD1/4PS103JL
	R 259		RS1/10S221J

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	C 201 202 203 204		CEA100M16LS2
	C 205 206		CEA2R2M50LS2
	C 207		CKSYF105Z25
	C 208 222 227		CEA101M10L2
	C 209 210 211 212		CEAR47M50LS2
	C 213 214 215 216		CEA010M50LS2
	C 217 218 219 220 223 224 225 226		CEA4R7M35LS
	C 221 244		CEA101M10LS
	C 228		CKSQYB223K25
	C 229 232		CEA221M10L2
	C 230		CKSQYB153K50
	C 231 238 239		CEA470M25L2
	C 233 237		CKSYB473K25
	C 234		CEA010M50L2
	C 236		CEA100M50L2
	C 240 241 242 247	1000μF/16V	CCH1003
	C 243	2200μF/16V	CCH-123
	C 250		CCG1004

Unit Number :
Unit Name : Switch P.C.Board

Mark	Circuit Symbol & No.	Part Name	Part No.
**	S 1	Switch(CST SET)	CSN-089
**	S 2 3	Switch(CST IN､70μs)	CSN1003
	MR 1 2	Magnetic Resistive Device	SDME106B

Unit Number :
Unit Name : P.C.Board Unit

Mark	Circuit Symbol & No.	Part Name	Part No.
*	D 1 2 3		1S1555

Unit Number :
Unit Name : Carriage P.C.Board

Mark	Circuit Symbol & No.	Part Name	Part No.
**	M 831	Motor Unit(Spindle)	CXM1033
**	M 832	Motor Unit(Carriage)	CXA2133
**	S 831	Switch(Home)	CSN-094

Unit Number :
Unit Name : Mechanism P.C. Board

Mark	Circuit Symbol & No.	Part Name	Part No.
**	Q 831	Photo-Transistor	PH102-F
**	D 831	LED(Disc Detect)	SLR-981A
**	M 833	Motor Unit(Loading)	CXA2129
**	S 832	Switch(Disc Set)	CSN1009

Miscellaneous Parts List

Mark	Circuit Symbol & No.	Part Name	Part No.
		PU Unit	CGY1007
**		Head Unit	CXA2462
**	M 1 2	Motor(Head、FF/REW)	CXA2429
**	M 3	Motor(Capstan)	CXM1007
	BZ 801	Buzzer	CPV1005
**	VR 1	Volume	CCS1104
**	VR 2	Volume	CCS1122